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Computer Weekly

Thursday, June 23, 1983

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US steps up ban on eastern exports

From page 1

sensitive goods to Eastern Europe. The UK government is vigorously opposed to the introduction of the military committee at Cocom, and has so far refused to convene the sub-committee to set it up. The revised list of controlled goods is causing even more acute embarrassment.

The advisory document for the list is currently in use by US customs officials, and was released to a congressional committee in April last year. It is so comprehensive that one irritated trade official was heard to say that it amounts to a complete embargo on trade with Eastern Europe.

The problem for the UK is that if it adopts the current proposals at Cocom, it is normal procedure to incorporate those proposals into UK trade legislation.

This would amount to an effective loss of sovereignty over technology trade. The US Chamber of Commerce in Europe has joined the chamber in London in warning the US that "the attempt to give extra territorial effect to US law is not and will not be accepted by the allies".

Amongst those members of the US Chamber of Commerce in London who have broadly endorsed the stand taken by the US companies abroad is IBM.

According to Lawrence Brady, who spoke to *Computer Weekly* after he had received the chamber's view, the USSR is not very good at making computers and has severe error problems with semiconductor production.

"This creates time lag and a qualitative gap which the US wishes to maintain," according to Brady, because electronics is integral to all modern weaponry.

The object of the whole exercise is to deprive the USSR and its allies of militarily valuable technology, he continued.

All the governments of the Alliance agree with this objective, but it is the manner and comprehensiveness of how the goal is being achieved that worries the West. A number of UK nationals have featured in spectacular cases in the US, but the most serious allegations to date in terms of scale of illegal shipments of computers is made against Alan Simmons, whose address is given as: Isleard, Cornwall, and who is alleged to be controlling a company in Piraeus, Greece, called Digital Resources Ltd.

In September 1982 Simmons was temporarily denied all US export privileges pending the outcome of any administrative or criminal proceedings resulting from the investigations.

The US customs say that Simmons is suspected of re-exporting up to 25 large desktop systems to the Soviet Union via Piraeus without Office of Export Administration licences.

Despite the allegations about the readiness of the UK and against Simmons and five other UK nationals, the UK customs have made only 20 seizures in the past year. Now has come to court and all have been settled, with administrative action - is fines imposed by customs.

Micro makers are unaware of help

by Nuala Moran

BRITISH micro-makers are unaware of all the government aid available for their efforts to sell overseas.

That was one of the conclusions of a meeting last week between representatives of the British Microcomputer Manufacturers' Group (BMMG) and senior officials of the Department of Trade to discuss, among other points, government aid for micro exports.

Nigel Smith, vice-chairman of the BMMG and director of Modus Systems, said: "To a certain extent there has been a communications gap. Not every company has been aware of the measures available to help exporters."

And David Wiseman, of the Export Europe division of the DoT, said: "Part of the problem is that people don't absorb information unless they need to know. The Department has done numerous mailshots and presentations as well as advertising and have articles in the national press. I think that the message is starting to get through."

Wiseman feels that British manufacturers have taken full advantage of governmental aid available in the European market.

This was the first meeting between the DoT and the BMMG, which was formed as an ad hoc committee of companies in the UK to win support and publicity for micro manufacturers. It now has about 20 members.

The group also brought up the four other points of its five-point initiative, including seeking a reduction in the rate of import duty on components from 17% to 7%.

The BMMG holds that this gives an unfair advantage to foreign microcomputers, which carry only a 5% duty when shipped into the country fully assembled.

But help on this point was not available from the DoT which pointed out that Customs duties were not its department.

Other points of the group's initiative also did not fall into the DoT's sphere of influence. The BMMG wants British manufacturers to be supported by government purchasing policies.

Smith said: "We want the CTTA (Central Computer and Telecommunications Agency) to take a chauvinistic view in drawing up its list of micros which government departments may purchase."



CLEMENTS... "Customers prefer 'one-stop shopping'."

STC 3270 sales hit £12 million

by Donald Kennett

STC Business Systems' first quarter figures include £6.5 million worth of sales for its 3280, IBM 3270-compatible VDUs, which is more than the whole year's sales of the device in 1981. Last year's sales of the device, at £12 million, were higher than the previous two years combined. There are now 120,000 installed in Europe, 16,000 of them in the UK.

Managing director Peter Breen outlined several of the company's successes in the two years since he took over, moving in from STC's Broomfield multi-layer printed circuit board factory in Scotland, where as general manager he had seen turnover grow from £2 million to £15 million in four years.

The company's Perifort 3000 screen-based teleprinter-Breen described as a "runaway success". There was a greater demand for it than the company could currently cope with, although it had not yet fallen behind with deliveries. The orders placed by British Telecom since the device was launched 15 months ago now totalled £59 million, he said.

Telecom 85, the major international exhibition in Geneva in October, would be the main platform for the launch of STC's office automation system, Breen said.

The system will be based on the

Managers buy out Q1 Europe

by George Black

ATLING micro firm Q1 of Europe, formerly owned by the government's British Technology Group and Q1 of New York, has had a management buy-out.

Q1 of New York filed for bankruptcy under Chapter 11 of US law last September after a year of severe difficulties. The European affiliate has now been taken over, after a "tortuous process", by its own employees for an undisclosed sum.

Renamed Quorum Computers, it will be headed by Alan Brown, who has been its chief executive for the past 18 months, with technical marketing director Martin Willard and financial controller Mike Pooley. At present they are being supported by an overdraft from their high street bank, but talks are in their closing stages with a merchant bank which is expected to take a 30% equity in the new company.

Q1 Europe was set up in 1979 by Q1, New York, and the National Enterprise Board under Sir Keith Joseph. The joint venture was to make and sell small office computers, concentrating heavily on software development.

Its first offering in 1980 was the desk-top Microline, based on the Zilog Z-80 chip, costing between £7,000 and £10,000.

STC 6100 message switch and is designed to work with existing PABX networks, as well as providing facilities such as electronic mail, filing and office diaries to users of existing terminals and personal computers. The 6100 on its own was another of Breen's success stories. Sales of £6 million, at an average of £50,000 a system, had been made in two years, he said.

Breen said it was essential if information technology was to get a grip that dramatic improvement be made in the man-machine interface.

Meanwhile the company's QCS-300 digital PABX for 50 to 300 lines is running in its first three pilot installations under the Department of Industry's interim licensing scheme. Breen said he expected British Telecom to approve the system next month.

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New VDU safety rules are closer

by John Riley

AFTER years of delay the International Standards Organisation, under its new British secretariat, has week beefed up its commitment to draw up new VDU safety standards.

The first meeting of the sub-committee on VDU safety, chaired by Tom Stewart, a partner in small office systems consultancy System Concepts, decided to base the new standards on the needs of users and not on technical aspects.

"The emphasis is on standards based on the users. We want to

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Computer Weekly

Thursday, June 30, 1983 Number 866 35p

Whitehall shies away from Inmos sale

by Kevin Cahill

FOLLOWING a bid of £80 million by Gould Inc of the United States, the UK government is being away from the outright sale of Inmos, the preferred option prior to the election.

According to Gould's president David Simpson, Gould, "looked at Inmos last year, they have a very good team there."

The bid, one of several now being considered by Inmos chairman Dr Malcolm Wilcox, is likely to be rejected in favour of a 15% stake by another US-based company.

An earlier offer made by Comshare is no longer considered a serious proposition, although Inmos officials say that when the bid was made it was not intended to be taken seriously.

Previously waiting in the wings as such blue chip names as IBM, ICL and British Telecom, but now is considered a serious contender.

British Telecom is seriously considering a manufacturing capacity for its life as a private company, but those plans do not extend as far as a semiconductor facility, in other the published or unpublished plans.

ICL is still not recovered from its financial disaster of two years ago to buy in to Inmos, though Fujitsu, ICL's partner in semiconductor technology, is a possible contender. Fujitsu's chairman was in the UK last week to trade officials.



SIMPSON... Eyed Inmos.

Minnows demand a better Esprit deal

by John Riley

EUROPE'S medium sized computer companies gave the thumbs down last weekend to the European Commission's 10 year £937 million research and development programme for information technology, Esprit.

The Association of the European Informatics Industry (EII) hit out at the Esprit programme on several counts.

The objections were that it is inadequately funded, that it benefits only large companies, that it only funds pre-competitive research and makes no provision for competitive research, that results will not be freely available, and that selection of projects will be politically motivated.

The funding offered for the proposed main Esprit programme, as well as for the one year £7.2 million pilot Esprit programme, is similar to that proposed for the Alvey programme in the UK - industry has to stump up 50% of the cost. That is the cause of bitter contention to EII whose members say they cannot afford that much for speculative R&D.

Mike Smith, chairman of software house CAP, which was involved in the pre-pilot Esprit programme, said: "The IT industries in Europe spend more on research and development than those in Japan, yet Europe's competitive position is being continuously eroded."

Smith thinks that funding should be 100%. "With 50% funding small companies will only participate to do things they would do anyway."

The pilot projects of the Esprit programme will be formally announced this week but there is strong expectation that 85% of the cash will go to the projects with participants from Europe's 12 largest computer manufacturers.

Jacques Maillet, president of EII and managing director of French DP company Intertechnique, wants a better deal for the smaller companies.

But Doug Lindsay, ICL's key representative in the European Commission, cautiously backed Esprit, amid strong but unsubstantiated rumours last week that ICL is not getting cash for the pilot phase. "ICL's experience of Esprit has been a long experience of healthy scepticism," he said.

Peter Dietz, head of German company Dietz Computer Systems, concluded: "The message that comes across is that with the exception of ICL, none of us supports Esprit or has participated or has seriously applied for it. Something has to be wrong - either with us or with the programme."



SMITH... "Europe's competitive position is being continuously eroded."

Union calls out 50 key BT engineers

by Nuala Moran

BT's British Telecom engineers who work in key computer jobs such as data transmission were called out on indefinite strike on Monday.

The strike is a protest against the connection made last week by Telecom management - between the private network Mercury and the BT network at Mercury's head office in Long Acre, London.

The BT engineers are members of the Post Office Engineering Union (POEU) which said it understood the strike had 100% support.

But a spokesman for BT said that only 27 engineers failed to report for duty on Monday morning. "We are looking at the situation to see what needs to be done to maintain our services to customers. BT continues to explore action of this nature which adversely affects customers," he said.

The union says the strike is intended to give management a "short, sharp shock", and added that the action will be extended if any more connections are made.

Telecom says British Petroleum's headquarters in the City of London was also connected to Mercury last week, but the POEU denies this is so. The union expects the connection to be made this week, in which case it will step up the action.

Sandy Skinner, Mercury's marketing communications manager, said he was "not in a position to comment" over the strike, but he confirmed that the connection made last week is operational, and also that the connection was made at BT's offices.

The union plans to finance its actions with a £1 per week levy imposed on all the POEU's 130,000 members.

The POEU is planning a special one day conference for August to consider what industrial action to take to fight the BT privatisation bill. The government plans to formally introduce it in July and expects it to reach the committee stage by October. David Norman, acting general secretary of the POEU, said he did not expect an all-out strike. "It will be hard hitting action aimed at customers involved in Mercury," he said.

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Micro News.....	7
Company News.....	8
Software File.....	10/11
Travels, Platforms.....	12
Letters, Leaders.....	13
People.....	14
Workshops.....	16
Machine Vision; Robotics.....	17
Was Telecom wrong to make Prestel too domestic.....	19
Computers.....	21
Operating Systems: ICL delivers VMB at last.....	24
Products.....	25, 26
Job Vacancies.....	27-55
Scientific and Research Jobs.....	50

Is Prestel too domestic?..... 19

Browlee woos UK accountants..... 11

Simon's Rascal is down in City..... 8

The Bills return with Maggie...

by our Parliamentary Correspondent
THE government lost no time following the state opening of the new Parliament in re-introducing the first batch of the Bills halted by the General Election.

And at the top of the queue was the Data Protection Bill which is starting its passage in the Lords second time around.

There is a degree of support from the Opposition parties for the principle of the Bill, although Labour MPs and peers would still like its scope widened to give the public access rights to manual files as well as computer-held information about individuals.

A tough fight again lies ahead, however, following the reintroduction of the British Telecommunications Bill in the same form as the previous Bill. It will transfer British Telecom from a state corporation into a private company, with the government intend-

ing to sell 51% of the shares to the private sector.

No target date has been fixed for the sale but there is expectation that the deals will be completed by the autumn of 1984.

L. hour, with strong union support, intends to mount a spirited rearguard action to delay progress with the legislation as long as possible. But with a 144 Conservative majority in the new Commons there is little hope of them achieving any substantial amendments which the government is not willing to concede.

Those amendments that are made are more likely to result from a few misgivings expressed by Conservative backbench MPs.

Fears that the government intends to break up British Telecom into several smaller companies are not likely to be realised, but the government hopes to open new job opportunities and there will be new rules to govern telecommuni-

cation equipment standards.

The Bill will prevent British Telecom exploiting its dominant position in the market by providing increasing opportunities for both domestic and business users of telecommunications services and apparatus to have a wider choice of supplier.

Controls on the availability and use of private telegraphy apparatus are tightened by the Bill.

Another Bill, foreshadowed in a White Paper in April and confirmed in the Queen's Speech programme, is the proposed Cable Bill. This will provide for the setting up of a Cable Authority and developing multi-channel cable.

The Queen's Speech promised "continued attention will be paid to the development and application of new technology." And that was one of the themes developed by the Prime Minister in her opening speech setting out the aims of government.

Election kills the Bills

by John Kavanagh and George Black
FOUR cornerstones in government policy affecting the computer industry were killed with the election.

From Computer Weekly, May 12.

Expenditure on science and technology has risen from £106 million in 1978/79 to a projected £325 million in 1983/84 - an increase of 80% in real terms.

Within the total, support for innovation in industry has risen from £57 million in 1978/79 to £230 million in 1983/84 - an increase of 135% in real terms.

Overall direction continues to be

in the hands of Kenneth Baker, Minister for Industry and Information Technology, within the merged Department of Trade and Industry. The oversight of the department, Secretary of State Cecil Parkinson, has previous experience in the trade side but will want to rely a good deal on Baker until he settles down to his wider responsibilities.

Tandy delves deeper into business market

by John Kavanagh

TANDY is pushing further into the business market with a 50% expansion of its UK microcomputer dealer network over the next year.

The big US electronics firm is taking on at least one dealer a week and setting up 25 computer shops or departments of its own by next summer.

Tandy has over 220 shops and 100 dealers in the UK. All the shops sell computers and 25 of them only sell computers while 4 have separate computer departments. Computing now accounts for 35% of the company's business.

"We're much more business computing oriented than before," said UK managing director John Sayers. "The computers-only stores are business centres, providing demonstrations, training and service to local businesses. Over 60% of our computing revenue now comes from the business market."

Sayers said Tandy was expanding its dealer network across the world. The company had nearly 8,500 outlets worldwide, 6,500 of them in the US. In the UK David Bryant has been appointed to find and appoint dealers.



SAYERS... A dealer a week.

Tandem gets into shape for Europe

by John Riley

TANDEM Computers, the US-based market leader in fault-tolerant minicomputer systems, is reorganising its European operations into a new division called Tandem Computers Europe, to take advantage of the competition.

Increased competition from IBM and DEC and other companies which have recently launched fault-tolerant systems has helped Tandem considerably, according to UK managing director John Louth, and the trend in growth has not slackened.

"The new division provides a single management focal point in Europe," said Gerald Peterson, Tandem vice-president of international marketing. "We see significant opportunities for continued growth there and it is important that we have the right organisation and infrastructure in place to provide timely and specific support."

Louth explained the paradox that sales had become easier to win than the entry by other companies into the fault-tolerant market.

"Being first in the fault-tolerant market caused problems in gaining credibility for the concept," he said, "but now that IBM and DEC are selling fault-tolerant systems more people are coming to us saying they need them."



LOUTH... Competition has helped Tandem.



LOUTH... Competition has helped Tandem.

Tandem recently launched a fibre optic link for its NonStop systems which allows 14 systems, each with up to 16 individual processors to be connected to a distance of one kilometre apart.

According to Louth, this makes it possible for large mainframe users to distribute big databases to local processors in individual departments.

Analysts scorn the IBM/Rolm tie-up

by Kevin Cahill

TWO leading US computer industry analysts have cast doubt on the value of the recent Rolm/IBM tie-up.

Analysts Clifford Higgerson and Karen Mulvaney of San Francisco brokers Hambrecht and Quist said it would be at least two years before IBM had a third generation voice data switch for the middle and upper end of the PABX market, despite the deal with Rolm.

A true voice data switch which can handle data as easily as voice is the key element for companies involved in the office automation industry, according to the analysts, who note that IBM's tie-up with Rolm implies that IBM has failed to find such a switch internally or through the now abandoned deal with Mitel.

If the deal with IBM does not work out, it may be too late for IBM to find a means of getting into the field on time.

This implies that IBM could

find itself a minor force in the office automation market.

Mulvaney and Higgerson note that IBM has been trying to develop a switch for 15 to 20 years and still does not have a product.

They point out that IBM has been selling the Carnation switch in Europe for several years, but has not tried to do so in the US.

Rolm has strenuously argued that its CBX product is adequate. The analysts say it is adequate for existing requirements, but probably does not have the capability to meet the data requirements of most users in the late 1980s.

On a more general level the two analysts say that the deal is also confusing because both companies have similar strengths and weaknesses. Both companies, they note, have strong end user markets and capability, are well managed and have very strong balance sheets.

The deal will do most to benefit Rolm, which has everything to gain and nothing to lose, they say.

Quality aces plan a summit

by George Black

THE biggest software validation conference to be held in Europe for at least 10 years takes place in Darmstadt, West Germany, in September.

The main route to technical excellence through the universities, said Richard Pearson, head of the Quality Market Group who will conduct the research, "and if we're not a shortage of graduates coming into the industry now at the bottom of the recession, it can only get worse if nothing is done."

"We are therefore looking for evidence of shortages of graduates in new technology industries and whether new courses in the universities, for example, MSc courses in software engineering, could help redress the situation."

The IT industry with recruitment difficulties, he said, Pearson can help by explaining its attempt to advance formal verification, a more advanced form of program testing, to smaller programs of less than 2,000 lines to larger systems such as compilers.

Other guests include Colorado University's Leon Osterwell, a data flow analysis expert, and Texas University's Donald Good. Richard Fairley of Wang Institute and Leon Stucki of Silver Spring will discuss software tools.

The symposium is being organised by the National Computing Centre and its German equivalent GMD and is scheduled for September 26-30.

Sixteen top names from the US and Germany have been lined up to see if a plan can be worked out to combine all their approaches to the bottom of quality control.

... but South Africa doubts its law

by George Black

THE South African Computer Evidence Bill promulgated in May has raised doubts among industry leaders about whether it will work in practice.

The bill came into effect not long before the re-introduction in the UK of the Police and Criminal Evidence Bill, which contains an important clause designed to allow the evidence of computers to be presented in court.

In South Africa computer output can be admitted if accompanied by an authenticating affidavit. But many bodies, such as government departments, banks and insurance companies are exempt from the affidavit provision.

But the South African Computer Society objects that making such exceptions is unfair. Affidavit signers are liable to fines if the computer turns out to be wrong. The South African Computer Users Council has also objected.

Data processing managers may be loath to sign the affidavit, it is feared, and supplementary affidavits from his staff may also be required, forcing up the cost of litigation.

The bill was promoted by the banks who want to cut out the need for personal evidence in court. South Africa still awaits suitable test cases to find out the law's implications.

In this country there will be a similar need for showing that the computer concerned can be relied on, but here too the details of procedure remain unclear.

Compec North warms all

by Andrew Thomas

DBSPITE competition from World Cup cricket at Old Trafford, over 5,000 people went through the turnstiles at Compec North last week, an increase of 16% over 1982. And with the number of stands nudging the magical 100 mark, there was plenty for them to see.

Held over three days at Belle Vue, the third Compec North appeared to go down well with the public, for not only were the attendances up, the visitors tended to stay longer than in previous years.

Considering the sometimes oppressive heat in the exhibition hall (a fire extinguisher set itself off on Wednesday afternoon), the public's tenacity must be put down to the quality of the exhibitors.

And, although new hardware was on show on several stands, much of the talk concerned a product which wasn't there - the ACT Apricot.



Compec North did well for crowds and stands.

France pushes on with videotex plan

by Jack Geo

FRANCE's Ministry of Telecommunications has announced that it is to invite tenders for a new generation of intelligent computer terminals as it pushes ahead with its teletext interactive videotex programme.

Proposals are to be requested from manufacturers later this year for a terminal, equipped with the potential of a microcomputer, which will cost no more than the Minitel, the model which is now being installed at a unit price of 1,200 francs (£100).

It will be used in association with microcomputers of the Apple II type or the newly introduced TO-7 manufactured by Thomson-CSF.

First deliveries of the new intelligent terminals are scheduled for the middle of 1985. By then about 700,000 Minitels will already have been supplied for Teletel, principally for connection to French Telecom's electronic telephone directory.

The first order for the new super-mini TELS is expected to be for between 300,000 and 500,000 units.

Its introduction by French Telecom is expected to provide a major boost for the French peripherals industry. Existing Minitels lack the intelligence required for association with professional line printers.

The new terminal programme is also regarded as a significant step forward for France's five year electronics plan, the so-called Filière Electronique whose ambition is to halt the country into the same rank as Japan by the end of the 1980s.

Multicomputer goes to San Jose

by John Riley

THE San Jose based microcomputer company Molecular Logic last week bought its UK distributor, Brentford based Multicomputer, for an undisclosed sum.

Molecular's M200 multi-user, multi-computer system for over 10 months, and had a turnover in 1982 of about £1 million. Molecular's total turnover last year was \$22 million.

Arthur Kennedy, Multicomputer managing director, is to stay on in the same post and to take over as general manager of Molecular's European operations.

"We wanted a direct presence in Europe," said a spokesman for Molecular. "Multicomputer was very successful, but it is not the same as controlling a subsidiary. The acquisition will give us a foothold in Europe much more quickly than if we were trying to do it from scratch."

Molecular states that all the UK employees are being retained, and that new staff is being added. The company has considered manufacturing in Europe, but says that it is

too early to determine whether it would be more economic to manufacture than to ship the systems. For the present it intends to build up its presence in Europe.

The M200 systems give each user a separate Z80 CPU with 4 Kbytes RAM and access to standard disc files, peripherals and a remote terminal. Up to 225 users can share hard disc storage which can be expanded to 600 Mbytes.

The system runs under a CP/M operating system, mStar, and will run standard CP/M applications programs.

Whitehall's IT staff worry will be tested

by John Riley

THE Institute of Manpower Studies (IMS) is to receive £15,000 to examine Whitehall's worry that the information technology industry is not getting enough new graduates.

Last week the Department of Employment commissioned a Brighton-based IMS to interview about 100 high technology employers to see if there is a problem, and to identify employers' needs.

The resulting report, expected to be ready in three months' time, will be fed to the Department of Education for action.

"The main route to technical excellence through the universities," said Richard Pearson, head of the Quality Market Group who will conduct the research, "and if we're not a shortage of graduates coming into the industry now at the bottom of the recession, it can only get worse if nothing is done."

"We are therefore looking for evidence of shortages of graduates in new technology industries and whether new courses in the universities, for example, MSc courses in software engineering, could help redress the situation."

The IT industry with recruitment difficulties, he said, Pearson can help by explaining its attempt to advance formal verification, a more advanced form of program testing, to smaller programs of less than 2,000 lines to larger systems such as compilers.

Other guests include Colorado University's Leon Osterwell, a data flow analysis expert, and Texas University's Donald Good. Richard Fairley of Wang Institute and Leon Stucki of Silver Spring will discuss software tools.

The symposium is being organised by the National Computing Centre and its German equivalent GMD and is scheduled for September 26-30.

ICL hits back at US export ban

A TOP ICL man last week hit out at the US government's attempt to control high technology exports.

Free trade in high technology is rapidly being stifled by the US, and the US Defence Department is exerting a direct influence on trade affairs to tighten the restrictions still further, according to ICL's Jeremy Strachan, head of the group's legal services.

Two weeks ago, in the face of an unprecedented blitz on 10 Downing Street by US vice-president George Bush and various other US government high officials, including Casper Weinberger the Defence Secretary, the Prime Minister set up a special Cabinet sub-committee to consider the situation.

So far ICL, which does £35 million a year in Eastern Europe, is the first company to come out in the open, although other companies including Ferranti, Marconi, GEC, and Plessey are known to have had discussions at the Trade Department about the de-stabilisation of computers and electronic gear intended for UK companies.

Strachan, speaking to a meeting of the EIII, the Association of the European Independent Informatics Industry, whose members include ICL, Plessey, GEC, Ferranti, CAP, and CASS, said: "ICL sometimes can't understand why we can't get export licences for comparable machines for comparable countries in comparable circumstances."

His remark came in the context of a renewed bid by ICL to develop trading links with China.

China, with other countries of the Eastern bloc, was in a special category and required export licences for all high technology goods.

But two weeks ago the US administration declared that China was now cleared for computer shipments, omitting to mention that in 1982 alone the US shipped \$118 million worth of computers to China.

This massive delivery of computers was made while companies like ICL, Fujitsu and Hitachi were denied, through the Cocom committee procedures, licences for large deliveries of computers to China.

Strachan also complained about the US application of extra-territoriality. This is the extension of national law beyond national boundaries and is one of the key issues at government level between the US and the UK.

"US export control is the most pervasive, elaborate and detailed system of export control in the world," according to Strachan.

He noted that "the US seeks to control any product which contains goods or technology of US origin. The US tracks and polices exports of end products around the world."

The US denial list, as it is called, is 400 pages long and Strachan said that many US corporations had to maintain a full-time vice-president in Washington just to deal with the list.

This is something European companies - some which would merely be using a US made fan in a machine - could not afford to do.

Strachan also confirmed that ICL had discovered items which the US would not ship to the Allies, even where the goods were not intended for incorporation or on-shipment to Eastern Europe.

Referring to the Cocom list, which is now the centre of a major deadlock between the UK and the US, Strachan said: "The US regarded the Cocom list as a minimum, whereas the UK regarded it as a maximum."

Cocom is the NATO co-ordinating committee for technology trade between the Allies and Eastern Europe.

The committee is currently considering a series of US proposals for tightening up on what can be shipped to the East. So far the UK has refused to countenance these proposals.

Strachan's comments brought surprised reaction from some of the other participants at the meeting, including Jacques Maillet, president of the EIII, who had not been aware of the extent of the US legislation and described it as "absurd".

Peter Dietz, president of German company Dietz Computers, expressed scepticism about a German company needing a US licence to ship to France, but Strachan assured him that this was just what extra-territoriality meant in practice.

"Just check your licence for US equipment," Strachan said. "They are stamped 'Not licensed for re-export' and theoretically you have to contact Washington for permission to re-export."

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DEC puts micros on the streets

by John Kavanagh
US GIANT Digital Equipment (DEC) is moving into the high street to sell its microcomputers directly to small business users.

The first DEC Small Business Centre will be opened in Geneva at the end of the summer and other centres will open in major European countries this year.

At the same time the company is to start building the microcomputers in Europe.

DEC has 25 retail centres in the US selling its Professional and other microcomputers, launched last year. But in Europe it has sold to small business through dealers, concentrating its own sales force on orders for many machines from big companies.

DEC's growing activity in the end user market has upset minicomputer systems houses, which do not want competition from their main supplier.

But the company's microcomputer dealers have so far shown little concern about the centres.

"There has been conflict on the minicomputer side in the UK but as far as the Small Business Centres are concerned there's been no conflict in the US and no negative reaction from our distributors in Geneva," a DEC spokesman said.

"We are not aiming to take bread out of the mouths of our dealers. We see these centres helping users and helping us understand users better."

James Wickes, head of UK dealer Beauchamp Computer Systems, welcomed DEC's move. "DEC's plans don't worry me in the slightest," he said. "This will give DEC a high public profile — and that will mean more sales for us."

But Wickes has a warning for DEC: "If they're doing this to increase sales through the shops, they're wrong, judging by the experiences of others, including some very professional firms. 'Shops don't work in the UK."

Shop staff don't have time to sit with the customer and go through a package to explain it and make sure it fits the precise needs.

"In the US that doesn't matter because people have more money to throw around and they don't have to be sold a system so completely. In the UK there's less money around and people want to go into a system in detail."

The Small Business Centres will provide some initial consultancy to small businesses, sell microcomputers and software and provide training. DEC said it would be consulting centres rather than shops.

The decision on manufacturing is now being made at top level in DEC in Europe. The company has plants in Germany, Scotland and the Irish Republic.

One of the two Irish plants, in Galway, could be the main candidate for microcomputer manufacture as DEC is planning to invest £9 million in re-organising the factory.



HUNT... "We're in the acquisition mood."

MSA pays \$6m to grow

by George Black
THE top American software house MSA has paid around \$6 million for Computeristics of Connecticut, once owned by tyre company Uniroyl.

The deal involves MSA taking over the software division of Computeristics — which represents most of its working parts — for 100,000 shares of stock plus \$1 million in cash — and MSA has \$1.7 million of liabilities to pay off, by way of bank loans and other commitments.

Computeristics president James Chambers will become head of the MSA division, promoting the re-named MSA order processing system. MSA will take over the firm's 60 technical staff, a few of whom could be moved to BSA's new premises scheduled to open in Maidenhead in August.

The takeover still leaves MSA with money to spend from its recent raising of \$55 million.

"We're in the acquisition mood right now," said executive vice-president Michael Hunt, "and looking to expand our applications range further."

The Computeristics products will help to consolidate MSA's financial and manufacturing systems which have made it the world's largest organisation of its kind, with a revenue above \$100 million a year.

The move strengthens MSA's applications range with the order processing system CustomOrder, as well as removing a rival in the accounts receivable sphere in CustomAR.

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Funds transfer will also boost sales to the wholesale and retail trades. This will be the fastest-growing area, with sales going from \$855 million in 1981 to over \$2,600 million by 1985.

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*Mainframes and Supercomputers. 93pp. \$1,095. Predicts, 11001 Cedar Avenue, Cleveland, Ohio 44116, US. Tel: 0101 216 795 3000.

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SALES BRIEF

Irish plant wins £45m Aussie deal

THE Wang factory in Limerick has won a £45 million order for computers from the Australian Department of Social Security.

It is the largest office automation deal yet in Australia, and the objective is to establish a fully communications system replacing the existing state-based system.

Brewery trial

GRAND Metropolitan subsidiary Samuel Webster Brewery has ordered a Wang Alliance 250 to be the core of an office automation system.

The machine is to be added to a Wang OIS 140 word processing system installed in January, being the total value of the order is £120,000. Two senior executives and their secretaries will try using voice messaging, electronic mail and diary facilities.

Types for IBM

MONOTYPE Corporation has signed a long-term agreement with IBM to supply data from its library of digitised typesets for use on its recently launched IBM 4141 photo-typesetting machine. The machine can handle on-demand printing of scientific text to a resolution of 600 dots-per-inch, which is comparable to conventional machines working from photographic images.

First in UK

APPLIED Communications Limited (ACL) has won a contract from the Trustee Savings Bank Scotland to provide an ATM network with full data transaction authorisation to run on Tandem computers. The deal involves BASE24-atom, ACP, EPT, processing and switching software package. This is the first such package to be installed in the UK.

£8m training

TELCONSULT, the overseas consultancy division of British Telecom International, has been awarded an £8 million contract to train 780 Libyan telecommunications students in the UK. The contract was awarded by the Libyan Posts and Telecommunications Department. The training is to run for seven years, will be given by the BT inland training division.

Keeping track

BANK of America has bought a UCC One tape management system from UCC Software Products to keep track of more than 4,000 tapes at its IBM installation in Croydon. The bank's database contains about 10 bytes of data and this is expected to double over the next two years. UCC One is in use at more than 2,000 sites. This is claimed to be several times as many as all its competitors combined.

£90,000 modems

WALBS Gas has placed a £90,000 order for 36 9,600-bit-per-second modems with Codex. The Type LS1 V22 modems will be used on LSI V22 modems leased from and "Wales Gas" own microwave radio circuits between four regional offices and the JCL 2966 mainframe at head office in Cardiff, where data on customers, employees, materials and the gas network will be processed.

Bank order

NATIONAL Westminster Bank has ordered £338,000 worth of Datapoint Arcnet based hardware and software as a step towards putting a set of distributed integrated accounting applications into its purchasing and stationary department. The bank has now spent £750,000 on "Datapoint" equipment.

UK intelligence record isn't bright

by George Black
MAYNARD has failed to invest in artificial intelligence for so long that it cannot now deliver the goods in time.

That was what a meeting of more than 70 people from the computer industry, the academic world and prospective users heard from Masoud Yazdani, a lecturer at Loughborough University.

He told a London seminar that there had been very little spending on expert systems here so far, compared to what had been undertaken by the US defence department.

Now the Alvey committee was calling for products to be marketed within three years.

"But if you don't invest you can't expect to get the technology," said Yazdani. "The goals can't be achieved short-term."

Early failures had resulted from being over-ambitious, he said. Now researchers had narrowed their sites from general intelligence to particular domains and the results were beginning to come.

Richard Forsyth, of North London Polytechnic and Hexadecimal Press, criticised Alvey's plan for a smart robot project as part of the expert systems programme.

"It seems to me to be barking up the wrong tree," he said. "This type of project is not calculated to show expert systems off in their best light, because they are more suited to intellectual tasks, where expertise is scarce."

The seminar brought to light the broad range of work under development. Southdata has commissioned two groups to turn its free-form database Superfile into an intelligent system.

One is being carried out by Donald Michie's Edinburgh team, based on his ACLS program; the other by Hexadecimal, linking Superfile to its Beagle system.

Hexadecimal's Forsyth is also building an expert system generator for the BBC micro, called Hulk.

Peter Jones, whose Revel is being marketed by Tymshare bureau, announced that it was being converted for DEC and Prime hardware, and would be available on the IBM PC by the end of the year.

Phil Cox, of Isis Systems, told the meeting about its new advice language system Micro Expert, which had evolved from one of the first expert systems money-makers, the geologists' Prospector.

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Vendors are told to prove themselves

by John Riley
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ANDREWS... Random checks.

ICE breaks the Arab market

by John Kavanagh
DISC and tapes from a young UK firm have gone on sale in department stores throughout the Middle East. And the company Independent Computer Engineering (ICE), has followed up this £2 million order with plans to manufacture in the US and raise money on the Stock Exchange to fund its rapid growth.

The Middle East order is from Riyadh House Bst, which has a dozen department stores across the region. It has recently started selling business microcomputers from Wang, Apple and Victor in the stores.

It has ordered 20- and 40-megabyte Winchester disc systems, tape back-up units and multiplexers which enable several microcomputers to share one disc drive.

ICE packages disc units from the UK manufacturer Rodime and the tape drives from the US firm Clipher. It adds its own interfaces and control software and builds the multiplexers itself.

This order takes ICE's exports to over £5.5 million in its second year. Its total business this year is expected to top £8 million.

"The customer wants to take a fifth of the order in the first month," said marketing director Andy Robson.



ROBSON... Looking for cash.

"We can cope with that. We've had the normal problem of cash-flow from rapid growth but we're now getting on top of it."

The venture capital firm Electra took 15% of ICE for £250,000 early this year. But Robson said it would be essential to go for a Stock Exchange listing to raise more money, probably early next year.

ICE is represented in 15 countries. It has had an agent in the US for a month but is now aiming at building systems there.

Robson said it would be cheaper to manufacture in the US than to ship completed products from the UK.

The USA had found direct attack on BT to be fruitless, so they had switched to pressing for liberalisation — not privatisation, he added.

"We think they have become competitive as a result, but we still have to wage a constant campaign to try to get the cost of data communications down in the interest of all our members," he said.

Telecom is urged to cut prices

by George Black
BRITISH Telecom is being urged to cut its charges to users after turning in half-year profits last year of £268 million.

And users now have a chance to tell BT what they think of it at its first Telecom (Telecom Customer Attitude Research) centre just opened in Ilford.

Two more centres will be opened in Coventry and Newcastle by September, creating 300 jobs.

But the Computing Services Association (CSA) says BT is still out of touch with its move to put

SDL saves IBM's German blushes

by Donald Kennett
SYSTEMS Designers (SDL) has been recalled by the West German Bundespost to enhance the software it wrote for the Bildschirmtext viewdata field trial.

Developing and testing the IBM system, which was supposed to handle the full public service in time for the Berlin Radio Show in September, has been delayed until May.

The Bundespost had wanted the September date so that manufacturers could launch terminals conforming to the more elaborate display standard to be used with it. A second GUC 4000 computer will run alongside the one used for the field trial, operating with software modified to support the new display standard.

Bildschirmtext chief Eric Danke

says this week that the contract under which IBM was working contained penalties for any delays, but he could not say whether the penalty would cover the cost of SDL's work until the contract was completed.

Limited quantities of the new terminals are to be delivered to information providers in the next few weeks, but they will only be available to the public after the Berlin Show. Loewe Opta is the first company to announce a terminal, but more are expected from Ilapunkt, Grundig, Siemens and others.

Old-style terminals are to be supported on the field trial system, which will carry data converted from the full service, until the end of next year.

West German Post and Tele-

communications Minister Christian Schwarz-Schilling has announced that the government will put an extra DM200 million (£77.5 million) into accelerating the spread of the Bildschirmtext network.

The Germans want it to provide local call access from anywhere in the country by the middle of 1985, instead of by 1988 as previously planned.

The display standard to be used on the full public service (in place of the Prestel display standard used on the field trial) is the one developed as a European standard by CEPT (the Conference of European Postal and Telecommunication administrations) in 1981.

It is designed to combine the best features of the rival British and French systems.



RATCLIFFE... "It is high time we went our separate ways."

Universal sale hots up the Pick race

by John Riley

THE Pick race speeded up this month, when systems house Universal Computers Limited (UCL), created a new rival by selling off its subsidiary IDM. Both companies announced deals to market IBM machines with the Pick operating system.

Interactive Data Machines (IDM), formed by UCL last January to market the Pick operating system on IBM's Series 1 minicomputer, was sold off last week for an undisclosed sum.

In the same week UCL announced an agreement to market the IBM 4300 mainframe with Pick, and IDM announced an agreement to market Revelation, a Pick look-alike system that allows the IBM PC to communicate with any Pick-based system.

"We were unhappy with the Series 1 under Pick," said Alan Wilson, UCL commercial director, "so when we gained distribu-

tion rights to the 4300 from Ultimate Corp last week we decided to sell IDM. It was a buy-out."

Neil Ratcliffe, IDM managing director and formerly managing director of UCL Northern, commented: "While we are grateful to UCL for assistance in the days of IDM's formation, it is high time we went our separate ways."

UCL, which sells the Ultimate and Universal minicomputers which are based respectively on Honeywell DPS Level 6 and Digital Equipment LSI machines with the Pick operating system, recently moved down into the micro market. Its new Pick-like operating system Epick runs on top of the CP/M operating system.

UCL has also recently acquired marketing rights for US company Software Express's program generator. Software Express has developed a Pick applications generator called Appgen to build a bridge with the rival Unix system.

Nixdorf in software link with CSD

NIXDORF has linked with software house CSD to market a warehouse system. The Pines system is said to cover all aspects of warehouse management from receipt of goods to final despatch, and runs on an 8870 minicomputer. Designed by CSD for supermarkets and wholesale distribution, it is written to be real time and interactive, to cope with a large volume of varied goods moving in and out of stock.

On their Marks

NCR has won a £3.5 million order to install a distributed processing network of NCR 1-9010 microcomputers in all 262 Marks & Spencer stores by the end of the year. Two NCR 1-9040 computers will call up the micros 12 at a time after closing time to collect all the stock replenishment orders within two hours.

Liquidator named

NEXOS Office Systems and linked companies came under the control of the liquidator, following privatisation of the group's two main businesses last year. David Buchler of Arthur Anderson & Co has been appointed to dispose of the assets of the three firms.

Bank interest

COUNTY Bank has taken a 25% equity holding in IBM System consultancy Wilkins Computer Systems. Wilkins has helped to install more than 60 IBM systems over the last 3½ years and expects County Bank's investment portfolio also includes Systime and Tycom.

MICRO NEWS

Honeywell opens Hemel aid centre

by Nuala Moran

HONEYWELL is setting up a sales assistance centre at its offices in Hemel Hempstead. It will provide a single focus for microSystem 6, Honeywell's break into the micro market, which had a UK launch two weeks ago.

Garry Young, Honeywell product marketing manager for mini and micro systems said: "The centre will accept orders direct from companies and will deal with enquiries from salesmen and others."

Brian Long, Honeywell UK managing director, scooped the suggestion that Honeywell's late entry into the micro market meant late sales. "We are not necessarily

late, nor have we lost opportunities. The compatibility of microSystem 6 with the rest of Honeywell's range means our timing is just right."

The company is aiming microSystem 6 at the top end of the personal computer market and the business/corporate market. Keith Manning, director of product marketing, said: "The corporate micro area is by far the biggest growth area."

He believes that so far there has been uncontrolled growth in this area because of incompatibility - a problem which microSystem 6 claims to overcome.

It looks as though Honeywell came round to the idea of entering

the micro market because of pressure on 16-bit mini sales from the 16-bit micros.

Honeywell sales of DPS-6 minis doubled between 1981 and 1982, and 1983 sales are already ahead of 1982. But Young said the bottom end of the mini range was not selling as well as the rest of the range because of competition from micros.

It was emphasised that Honeywell is not trying to sell the first-time user small businessman. According to Long some customers see the potential for 100 units.

At present there are 20-30 active dealers who will be adding microSystem 6 to their products.



LONG... "We are not necessarily late."

Rank to stay in the computer market

by Nuala Moran

RANK XEROX intends to stay in computers. Michael Winkler, manager of advanced systems for Rank Xerox, said last week that the company is making "continuing progress and commitment to the computer market."

It will spend £1 million on advertising in this area next year, he added.

A multi-million pound contract for Xerox 820 II microcomputers placed by a leading British organisation was to have been announced last week, but details were not completed in time. But there was a UK announcement of compatibility of the 820 microcomputers with the Ethernet local network, and new software packages for the 8010 executive workstation.

Ethernet links equipment within and between offices and can carry information from one location to another at rates of up to 10 Mbytes per second. Xerox has introduced the Shared Interface Unit (SIU) which connects two Xerox 820 II micros to be connected Ethernet. The SIU uses two industry standard RS232C/V24 ports.

A user can either connect the 820 II directly to an SIU port, or through modems over telephone lines.

The SIU will cost about £634. A collaborative venture between Xerox, software specialists Viscorp and 3Com Corporation the US networking specialists, was announced recently. This will allow users of IBM Personal Computers equipped with VisOn software to have direct access to services on an Ethernet.

Apple marshalls Lisa's Euro houses

by George Black

APPLE'S Lisa developers are on tour of Europe, organising software houses to provide applications which will sell the machine to users.

The controversial "mouse"-driven micro, unveiled in January, is now only a month away from public release. Already its inventors are claiming huge advance orders - more than double their forecasts, according to software manager Bruce Daniels.

Manufacturing capacity has been quadrupled, to bring the Cork production line on by September instead of next year, and upping output from California and Dallas.

But probably the crucial test for the Motorola 68000-based Lisa is whether Apple can persuade the applications writers to give the support it will need to compete with the IBM and DEC personal computers for a dominant place in the market. Though Apple points to the continuing high sales of Apple II, no one denies that the prosperity of the \$583 million revenue company during the Eighties rests on the success of its gamble to go up-market. Lisa has cost \$30-\$50 million to develop and has taken almost four years to reach the shops.

Smith hinted that a slimmed version - maybe derived from the forthcoming Macintosh - would be marketed by 1985.

While this could cost about half the present \$10,000 product, other enhanced models could also be introduced. In this way they hope to dispel early doubts about the price tag.

In London the team drew in some 25 firms interested in collaboration, including Hoskyns, Intel-

keting manager Barry Smith.

What came into sharp focus on the first day of the tour was that Lisa is the base of a range which is not expected to make its greatest impact until the second half of the decade.

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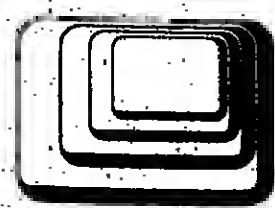
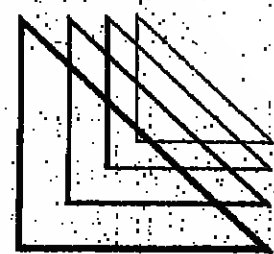
In London the team drew in some 25 firms interested in collaboration, including Hoskyns, Intel-

licence UK and Micro Focus, whose Level-11 Cobol is already implemented. In France they are talking to CAP-Gemini-Sogeti and in Germany to SES.

Apple's plans to attract more software houses have been clarified with details of its Workshop, coming in August, and Toolkit, available late this year or early next.

The Workshop includes Pascal, Basic and Cobol compilers, next year extended to C and Fortran. Toolkit is designed to speed up programming with devices like Clascal, a new super-set of Pascal. These will be added to the initial bundle of graphics, spreadsheet, database manager and word processor.

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ITT puts its muscle behind Z80-based business machine

by Donald Kennett

ITT Microcomputer Systems still has great hopes for the Z80-based 2030 business machine it launched early last year to replace its 2020 Apple-lookalike.

Defeating silence may have filled the space between then and now, but the company has been preparing to put its massive marketing muscle to changing this.

Three developments announced for the system at the Business To Business show earlier this week are designed to broaden its appeal, as well as proving the Lego-like basis of its construction. But according to Dr Paul Gardner, who was brought in to head the operation in June 1982, after its false start in January, it is the completeness of the package offered to dealers that will make it a market success.

The package includes documentation, dealer training, national and specialist press advertising, and the ability of the machine itself to fit a wide variety of applications.

"I think the relationship between supplier and dealer is as important as the one between dealer and user," Gardner said. "We held our first dealer conference about six weeks ago and there was a lot of interest and very few complaints. We were surprised."

The system had a quiet re-launch in February of this year and about 100 units have been sold through about 20 dealers. Gardner plans to build up to about 80 dealers by the end of the year. The head office team which supports them has grown from four to 13 since last June and will be 20 by the end of the year.

Central to the machine's capabilities is its upgrade path. The company offers module exchanges to take it from 64Kbytes of RAM to 256Kbytes and from 280Kbytes to 560Kbytes floppy disc drives.

In August it will launch a processor module exchange that will take it from eight-bit to 16-bit operation and in this week it launched a single- to multi-user upgrade. Winchester disc drives with capacities of 7Mbytes and 14Mbytes are available now and 10Mbyte and 20Mbyte drives are due soon.

"But if the software can't follow it without perturbation to the user, it's no good," Gardner said. "So that's what we've looked at and that's what's taken time - ITT stands for it takes time."

The multi-user upgrade involves a serial interface circuit board that enables the machines to be daisy-chained and a change to the multi-

user version of MP/SL's BOS business operating system, MBOS, which is invaluable to the user. The machine is also available with CP/M, but Gardner says this cannot support the upgrade path in the way that BOS can.

This week's announcement in BOS software is a coding and estimating package for printers. The company now plans to follow this with a new vertical market product announcement every five weeks.

The third development launched at the Business To Business show is a 14Mbyte cartridge tape drive for Winchester back-up. This enables small businesses to do their data storage housekeeping effectively, Gardner said.

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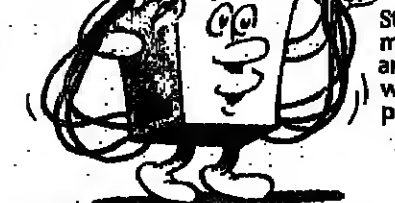
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COMPANY NEWS

Runaway Racal is run down in City

IN post inflationary times a profit growth, year on year, of 11.35% would not seem bad, yet the City men marked down Racal's shares by 40p to 510p after hearing the latest 11.30% profit rise.

Perhaps it was predictable, given the excessive expectations that the City has long had about Sir Ernest Harrison's go-go company, that there should have been a certain amount of "adjustment" as a more normal pace of growth overtook the zappy electronics giant.

Racal has pushed its turnover in 10 years from £37.3 million in 1973, to £763.5 million now.

While the brokers ask themselves whether Racal has plateaued after its headlong charge through the seventies, the company continues to put on massive volume.

Sales rose from £643.9 million in 1982, to £763.5 million in 1983, an 18.5% jump that added £120 million to Racal's turnover in the middle of a recession.

Within the global sales figures there has been some shifts in the make up of the turnover. The Data Commis division's business rose from £180 million and 28% of turnover, to £244 million and 32% of overall sales.

Radio Communications, which the company expects will contribute an additional £300 million from cellular radio in the nineties, slid in percentage terms from 28% and £180 million last year, to 25% and £190 million in 1983.

Other percentage and volume figures showed a drop of 2% as a share of the overall figure for marine electronics.

This activity, which includes the Decca chain of radio navigation stations turned in £83.9 million in 1983, compared with £83.5 million the previous years.

Racal has made plain its intentions of pursuing legal and other action against manufacturers who make devices which work off the

navigation signals transmitted by the stations which cost Racal £70 million to install.

The company has been plagued by cheap Taiwanese and Far East based suppliers which are entering the small boat navigation business on the back of the Racal service.

Since the beginning of the year Racal has laid off 600 workers at its Florida modern factory.

According to the company the problems there were caused by an inadequate accounting system which led to overstocking of finished goods and an "over employment situation".

The "situation", as the company so opaquely put it, has been so obviously rectified while the accounting system and its former head have been replaced.

But the current order book is strong and Nick Measham, the computer industry analyst at brokers Laurie Millbank, reckons that the gloom has been overdone.



HARRISON... Has his go-go company plateaued?

ICL sticks with its stricken Mitel

IF one stands in the Silicon Valley sophistication of Mitel's new Welsh factory and watches the SX 2000s and the SX 200s being assembled and shipped, it is hard to visualise the sea of troubles besetting the company.

Yet beset it is with its share price suspended on the New York Stock Exchange at \$8 and analysts beginning to forecast a loss for the coming quarter.

The most damaging blow to Mitel recently was IBM's decision to invest in Rolm Corporation. Rolm is a competitive supplier of telecommunications equipment. Mitel's instant reaction to the announcement was to quit the agreement in principal under which the Canadian minnow and the American whale were working to produce a fully software SX 2000 (ICL's DRX 2000).

Apparently there was little option for Mitel but to end the arrangement, despite the appearance of unconsidered haste conveyed by the speed of the pullout.

ICL is sticking with Robb Wilmot's statement at the end of April that the company is not going to abandon the Mitel deal. One major City of London stockbroker, Phillips and Drew, has already cancelled its Mitel/ICL order in favour of the Plessey 1DX, and a number of other orders have gone the same way.

ICL's willingness to hang on to with Mitel is based on the widely acknowledged excellence of the Mitel hardware, and the real prospect that once the delay is ended, the final product will be a winner.

US analysts have noted that shares, a buy recently, and the company is deploying considerable software resources of its own to the DRX.

Amdahl calls on investors

AMDAHL Corp, with its shares at an all-time high of \$60, has chosen this auspicious moment to dip into the coffers of investors for a cool \$50 million.

The object of the fund raising is to boost cash as the company's new 580 series mainframes gather steam in the market place.

Since the start of the 580 delivery season in the spring the company has drawn heavily on the credit arrangements with its banks, and will use the proceeds in part to repay this debt.

Ferranti profits are smack on target

FERRANTI, like a ferret true to form, brought in results that were smack on the nose of City expectations.

Profits, at £31.5 million, were a little up on the best forecasts made by the computer industry watchers in London, but represented a 32% hike on the previous year's £23 million.

Turnover at £372 million was 21% up on the previous year and the order book for the current year is already 20% up, setting Ferranti nicely in line for a surge towards

£425 million in sales next year.

Analysts are suggesting a profit of £40 million for 1983/84. The sharpest performer in the Ferranti stable was the electronics division, where turnover rose from £36.3 million to £52.1 million with profits showing a similar take-off and rising from last year's £4.3 million to £6.4 million.

According to group managing director Derek Allon-Jones much of this improvement came from rapidly rising production at the Chadderton wafer fabrication

plant, which recently doubled capacity by bringing new facilities onstream a year early.

The semi-custom chips produced at Chadderton, in which Ferranti holds a world lead, are used in such well-known products as the Sinclair ZX80 and the Nikon camera.

Indications from Ferranti about Chadderton imply that turnover in this area could rise by 50% or more in the current year, with profits going up a similar amount.

The computer division, which is

beginning to show signs of becoming adventurous in marketing not always evident in the past, is using the inhouse product in the highly successful personal micro the company is now selling in volume.

A lot of public attention was focussed on Ferranti at the time of the Falklands war when Ferranti electronics played a major role in various British successes there.

Allon-Jones noted that the Falklands war had led to a big increase in worldwide interest in the company's products.



WOOD... Good news.

BTG expects the unexpected

SIR Frederick Wood of the British Technology Group should announce its annual results much better than expected, mostly due to the success of Newbury Data.

The Newbury Data operation, which incorporates the old Data Recording Equipment Company and Newbury Labs, as well as the revamped United Peripherals operation in Winsford, has been under intensive treatment by a

new management for over two years. The company is now forecasting a £2 million profit for the remainder of this year.

For the year to May 1983 turnover at the merged operation rose to £44 million, from £38 million the previous year's £28 million.

For the remainder of 1983 a spokesman for Newbury Data says that the company will substantially exceed its target of £44 million.

Observers suggest that £50 to £55 million is now the management goal.

The improvement in Newbury Data's performance is likely to advance the probable privatisation of the company.

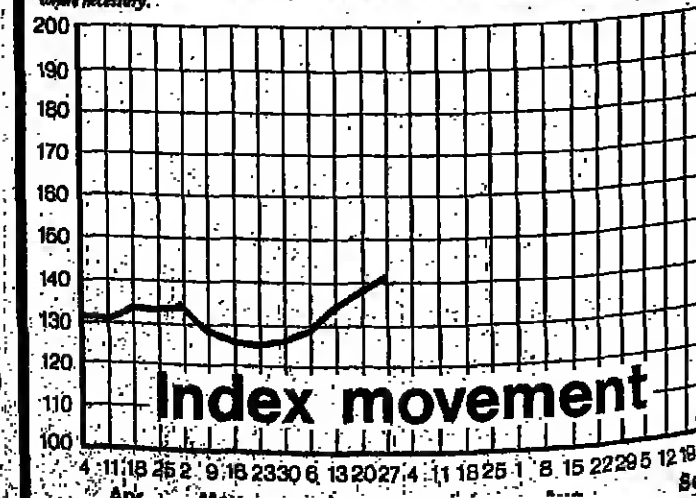
To continue the take up in spare manufacturing capacity at Winsford the company has entered a series of disc manufacturing deals in the US.

SHARES TABLE

The shares table, which is specially compiled for Computer Weekly, shows selected computer companies that reflect the state of the computer industry.

1983				1980			
Price	Low	High	Change	Price	Low	High	Change
100	100	100	0	100	100	100	0
101	101	101	0	101	101	101	0
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197	197	197	0	197	197	197	0
198	198	198	0	198	198	198	0
199	199	199	0	199	199	199	0
200	200	200	0	200	200	200	0

The table shows the closing prices in London on Friday and in America on Thursday. The Share Index is based on the prices of the UK companies in the table. Highs and Lows have been added where necessary.



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Visicalc authors go it alone

by Claire Gooding
The company that wrote the well-known Visicalc spreadsheet is to go it alone with a dynamic follow-up. Software Arts, the original author of Visicalc, is selling the second generation version, TKISolver, without the mighty marketing clout of Visicorp.

Visicalc was a phenomenal success, and became the "standard" spreadsheet application on eight-bit machines. Its authors, Bob Frankston and Dan Bricklin, could not interest anyone in it originally, and it was not until Day Fylstia Personal Software took it on that the product became hot property. Personal Software became one of the giants of the US software industry, and changed its name in 1981 to Visicorp to reflect the string of products triggered off by Visicalc.

This time around Software Arts is not going to share the spoils with anyone. TKISolver was launched in London last week with enough razzamatazz to convince the world that Software Arts has learnt a thing or two about marketing. Founded three years ago by Frankston and Bricklin, the company now has a \$4 million turnover.

"The pattern of the industry has changed," explained Software Arts president Bob Frankston. "These days it's along the lines of manufacturing, where the originators

supply goods in volume and then support them, rather than in the early days of 'software publishing'. Feedback from users is a vital part of support, so it is more sensible to link programming with marketing more closely."

TKISolver is at worst a more dynamic version of Visicalc and at best, to quote US publication *Byte*, "a quantum leap in software" - a phrase liberally re-used in Software Arts' aggressive sales campaign.

The product costs £289 in the UK as opposed to the \$299 US price, and is sold here by Marketing Micro Software of Ipswich. TKISolver sticks to the basic spreadsheet technique of rows and columns, but otherwise departs from the Visicalc mould. It leaves little for the user to do but enter the equation on one part of the screen, and the value of some of the variables on the "table" part above. It has been designed for simplicity of use: one keystroke, the "I" of TKISolver's title, gets the results of a calculation.

The "TK" part of the name refers to the Tool Kit underlying the product. This clever set of programs allows the user to turn an equation on its head and treat any part of it as the "unknown" quantity.

Other unusual qualities are the ability to change values automatically by treating different measurements (pounds, dollars, or

kilometres and miles, for example) as units; and "iterative solving", by which the value of an unknown quantity can gradually be guessed at and gradually adjusted.

Software Arts has not been able to protect TKISolver from the plagiarism that dogged Visicalc, except by giving it thorough documentation, which, according to Frankston, will be little used once people get to know the product, but does much to establish its unique style.

Software Arts is aiming the product at anyone who uses equations. According to marketing and sales director Bruce Rampe this includes personnel and accounting people as well as the traditional Visicalc targets of scientists, engineers and statisticians.

"Everything is an equation, a relationship between variables; it's just that we don't think of them like that," he said.

To attract particular "vertical market" users, TKISolver is backed up with a number of books called Solverpacks, which provide for £106 each, all the standard equations used in electronic and mechanical engineering, basic science, architecture and financial modelling. The books are published by McGraw Hill and the range continually updated.

Software Arts has not yet tailored the product to the UK market to the degree of providing a £ rather than a \$ sign, but, says Rampe, such details are far outweighed by the advantages TKISolver can offer UK users.



FRANKSTON and BRICKLIN... Visicalc authors are out on their own.



BROWNLEE... Landed on his feet with Walker.

Brownlee wants accountants

by Claire Gooding
EX-CHAIRMAN of Altergo Software David Brownlee is leading an assault on the heavies of the accounting industry at the head of a new financial software firm.

US company Walker Interactive Products International is setting up in the UK to market its online real time accounting packages. Walker will sell to IBM users across the entire IBM range, in direct opposition to MSA, McCormick and Dodge, and UK-owned firms like PPL and NSC.

The 180 strong company claims to be the fastest growing supplier of financial applications in the US, where it has 300 installations - a 180% jump in sales in the last year. As yet there are no users of Walker's online packages in the

UK, but the new subsidiary is out to replace "outdated" batch applications from better-known suppliers like MSA.

Brownlee left Altergo last Christmas, several months before the company crashed in April, and was immediately contacted by Walker, which had never been represented in the UK. Walker's US president Richard Courrier, previously head of Altergo's US operation, persuaded him to lead Walker's invasion of the UK, Europe, and the Middle East.

Brownlee's standing in the software industry puts some weight behind Walker's entry into an already crowded market. UK users have proved unresponsive in the past to the message that online, real time software is necessary for

accounting, but so far there has only been one other company - Northern Software Consultants - preaching the real time gospel.

According to Brownlee, Walker is the only supplier to offer a truly integrated set of packages with common data and user interface conventions used across the suite.

There are four packages in the first European offering: II/CL general ledger, II/AP accounts payable, II/MM materials management, and the II/PO purchasing package. There is no firm release date for the II/ARC module for accounts receivable and credit control.

Walker's packages are backed up with a set of software tools called Strategic Software. The productivity tools within the SS suite

are dubbed "Personalisers" because they allow users to tailor the basic packages to their own needs.

"A user can customise as he wants," said Walker vice president Mike Barton.

"They can build their own screens, set up online enquiries, generate reports and document their personalised software."

"The other advantage we have is the Software Bridge part of Strategic Software suite. It can run one version of the application under any IBM operating system."

MSA's stance is that real time facilities are at the bottom of its users' lists. "If real time applications had been all that important we'd have had 8,000 users screaming at us by now," said MSA UK director Stuart Walsh.

Program lets systems be tailor-made

MICROSOFTWARE house Holland Automation is taking parameterised programming one step further to produce tailor-made systems for end users. Holland has released an implementation program that will ease the design and installation of systems as specified by the users themselves. The program uses a question and answer technique to front-end Holland Automation's range of business and accounting packages, which are already parameterised. The user is guided through the facilities available and selects those that suit his particular business best. The Implementation Program will be part of the kit offered to new dealers.

Thumbs down

UNIX and MS-DOS have had the thumbs down from ABS, which has picked Digital Research's MP/M-86 operating systems for its new 16-bit Orb series. "We looked at various operating systems," said ABS OEM sales manager Bernard O'Leary, "and we decided that MP/M-86 was the best for a real multi-user, multi-tasking system. We haven't ruled out the possibility of implementing MS-DOS and Unix later."

Peachtree pack

PEACHTREE, the MSA subsidiary, is to collaborate with Sheffield Micro Information Systems to produce a package for manufacturing industry. The software, written in CIS Cobol, will combine Peachtree's business management system and accounting modules with Sheffield's inventory and production control modules.

Natural grows

ADABAS Software, the UK subsidiary of the West German Software AG, has broadened its range of products based on the Natural programming language. Three new additions are a database protection system, support for VSAM files under MVS and DOS/VSE operating systems, and a graphics module.

Control IMS

BOOLE and Babbage, the Californian IBM systems software house, has come to the aid of IMS database users with a new control package. The IMS management facilities (IMP) were written by consultant Tom Bird, chairman of IBM US user group Share's IMS advanced features committee. IMP is a system troubleshooter and forward-planner which Bird claims takes the guesswork out of IMS.

NCR's finance

MANUFACTURER NCR has plumped for one of the best-known financial modelling packages as the standard offering on its kit. The FCS financial modelling package, from UK company EPS Consultants, will be marketed jointly worldwide by the two companies for NCR's V-8500 large system family. NCR is also offering a different financial modelling package for its smaller 19000 range. Written by South African software house Total Computer Systems, the Deskcalc package is said to have more features than a micro package.

React to sums

A REPORT Evaluation and Calculation Tool, REACT, has been launched in the UK by MAI for use on its Basic Four business systems. The report generator package is said to be for non-data processing staff, and allows them to produce reports involving row and column calculations.

Take alarm

SYSTEMS Designers of Fleet has won a £350,000 contract from British Telecom to provide an alarm handling system for its international switching centre. The system, based on DEC PDP11/24 minicomputers, will monitor 10,000 alarm points and present status reports on the transmission equipment by colour text display.

Track convert

TRACK-50 project management software, which scored a hit on IBM and Prime minis, has been converted for use on DEC VAX 32-bit machines by its originator, T&B Computing of Michigan. It is being launched as Track-70 by the Canadian Sydney Development Company.

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Digital works on a Lisa competitor

by Martin Banks

FOLLOWING smartly on its support for Visicorp's Vision multiple screen operating environment, Digital Research is now working on the development of one of its own, and it aims to make it even more of a "desk-top analogy" than either Vision or Apple's Lisa system.

Speaking in London last week, Digital's vice president of Advanced Product Development, Tom Rolander, intimated that a new window-manager product to be called the User Interface could be expected by early next year, at the latest.

The Interface is being developed to work with the Concurrent CP/M to give a graphical display of what is happening with the different processes in this multi-tasking operating system is handling.

Full details of its capabilities are currently not available. "We have yet to get it to the Beta test stage," Rolander stated, while seeming confident that it could be launched by the end of this year.

A key feature that Rolander says will be incorporated in the Interface is the ability to have direct, on-screen communications between different tasks. This would make, he feels, a much better analogy of a working desk-top than has so far been achieved by window-oriented systems.

The way Rolander sees it working is that two tasks would be displayed by the User Interface side by side on the screen. This would correspond to someone having two pieces of paper next to

each other on a desk. Where data had to be transferred from one task to the other, the system would perform the job automatically.

This would involve the use of the essential physical complement to a window manager, a mouse, which the User Interface would monitor and control. This, he feels, becomes a much closer analogy to the desk-top, for by pointing to the data of one task with the mouse-directed cursor, and then pointing to the new location in the other task's window to effect the transfer, it is much more analogous to manually copying direct from one document to the other.

Current methods of performing this task using computers generally involve writing the data away to disc in a new file, and then calling that file back into the other task - analogous to writing out the information on a separate piece of paper that is ultimately thrown away.

The news about the User Interface comes as the competitive spirit between Digital Research and its arch rival Microsoft continues to wax strong.

Despite the fact that it was Microsoft that won the deal to produce the standard operating system for the IBM PC, Digital Research claims a greater number of long term OEM contracts with other 16-bit manufacturers.

It is also claiming that the Interface's host operating system, Concurrent CP/M, is about to bring forth several new applications programs for the IBM machine.

Home users beat US schools to education

HOME use of educational software is outstripping its introduction into schools, a US survey says.

Senior American politicians of both Republican and Democratic parties have been advocating a massive spending programme on educational software, but it is parents buying for their children who are fuelling the expansion most.

Combined sales in both market sectors are likely to reach \$1.59 billion by 1990, it is predicted. Dealers and distributors have been attracted by the entry into the field of new companies like Xerox Educational Publications and Spinnaker Software.

But Michael Killen, president of Strategic Incorporated in California, which carried out the new survey as a follow-up to its inquiry of two years ago, says there are now too many trying to play the game.

"Some don't have the staying power or the professional survival and there are already of shake-out here, as there before in the video game

Killen commented gloomily.

Parents are prepared to spend \$500 on a good program if it meant that their children would develop faster, he said - whereas schools had been held back by the recession.

*Educational software: the next boom to the microcomputer market, published by IPI, Nordre Ringvej 201, 2600-Glostrup, Copenhagen, Denmark, 130 pages, \$970.



IBN... "Signs of shake-out."

PLATFORM

Nick Measham and Patrick Hickey are industry analysts with Laurie Ashbank.

Why the Telecomms Bill needs to be redrafted



TORY victory means that plans to privatise British Telecom will continue apace. The Telecommunications Bill has very high priority and the sale of BT to the private sector will be a boost for Britain's telecoms industry. However, there are still big problems to be resolved on how to float and regulate an £8 billion corporation (GEC, currently the largest electronics company has a market capitalisation of over £6 billion).

If the government does not redraft the existing Telecomms Bill, then BT will slip into the private sector with little regulatory or competitive restraint. This may not matter unduly to telecoms equipment suppliers, who can supply BT as well as compete head on with it. But it will matter to network providers such as Mercury Communications or the Racial Cellular radio consortium and for those companies which intend to provide so-called value-added network services (VANs) using trunk

The fundamental point of privatising BT is to create competition by rolling back monopoly, not merely to honour a political pledge with expediency

communications links or cellular radio. VANs operators already mumble about unfair treatment from BT.

America's AT&T provides perhaps an unfortunate precedent. For the Federal Communications Commission (FCC), with all its slick lawyers, could never win in the struggle through AT&T's accounts. Though private, AT&T remained a powerful monopoly almost above the law, and only decided to demerge when the business climate suited it.

By the same token, privatising BT as the Bill now stands amounts to transferring a public monopoly into a private one without even the restraints imposed by the FCC.

There are three main considerations: one is to weigh up the best means of floating a huge issue; the second is to best up the powers of the new Office of Telecommunications (OfTel), which the Bill has created to regulate and oversee the telecoms industry; the third is to

10 YEARS AGO

FROM COMPUTER WEEKLY OF JUNE 28, 1973: Forrester announced that it would seek a Stock Exchange listing of its ordinary stock... Shell-Mex and BP bought the millimetre tape rental supplied by Memorex in the UK... The Hoechst chemical concern entered the office information processing equipment market with the aim of becoming "a third force along with Rank Xerox and IBM"... Siemens announced two new entry level systems, the 220 and 230.

Liveware
File

by
Don



PROFILE

From Dad's eel and pie shop to the boardroom

RAY FORTUNE has come a long way from his Dad's eel and pie shop to first English vice-president of an American computer corporation.

He got the job three years ago, just as Data General was about to undergo the reorganisation which changed it from a medium-sized, technically-oriented hardware maker into a major international marketing company.

"It was a Herculean task - bloody hard work, but it had to be done if we were to come through," he said. Now he is responsible for 1,600 staff covering DG's operations in Europe, Africa and the Middle East.

Fortune went to grammar school and on to London University with maths and science A-levels, but dropped out of his chemistry course there after only a week. A mixture of restlessness and immaturity was responsible for this, he says.

He learnt how to sell by beginning with ice cream for Wall's. One day in 1962, walking down Baker Street, he passed Burroughs' shop window. He didn't know what they did - but noticing an advertisement for a salesman, went in and talked to them.

by George Black

"Burroughs gave me a good training. I learnt how to program in several languages and how to sell accounting machines."

After five years he moved to Honeywell, selling its 200 series to the City.

When Honeywell and General Electric merged their computer interests at the start of the 1970s he took charge of selling the larger GE machines, with a team of nine under him.

Control Data took him on as sales manager in 1974 in an abortive effort to penetrate the com-

mercial data processing field, but there was not the software to back up the power of CDC's machines.

A year later Data General - still a relatively small outfit with only 3,000 staff and an \$80 million annual revenue - gave him his big break. He became its European sales director and moved with his family to Paris.

Data General president Ed de Castro had realised they had to change the way they did business. The company was not giving enough support to customers, was too obsessed with technical excellence, and too dependent on OEMs.

To make things worse, it was saddled with a world recession and a strong dollar upsetting trade.

Many of those who planned DG's transformation left during the process because they did not want to be part of a vast and structured company. They went



FORTUNE... "A Herculean task - but it had to be done if we were to come through".

on to their own start-up ventures. But Fortune had grown up in big firms and believed that a combination of enterprises and structure was not only possible, but mandatory.

"We have tried to set up a large structure consisting of a lot of small projects - the units are as large as necessary, but as small as possible."

Fortune has been one of the key men behind Data General's change of direction from depending on OEMs to serving end users.

"Customer satisfaction is not the most important thing - it's the only important thing. I'm not saying the customer can't be wrong, but if he is it's up to us to tell him why and what he should do instead."

He sees the 32-bit supermini market as likely to boom just as much as the micro market. Digital is still a clear leader in the field,

but DG aims to be number two.

Fortune claims they have a third-share of the unshipped backlog of 32-bit superminis and a technical lead with the MVI10000 machine. This position can only be maintained, he says, through ploughing 50% of the research and development expenditure into software and by ensuring that the firm keeps up its own semiconductor facility.

At 43 he is happy to live abroad - though he misses his three children who are at English private schools - but is sure he will eventually come back to settle in England.

"The neighbours think I'm crazy of course, but it keeps me happy and stops me getting homesick."

DOWNTIME

Here beginneth the book of Cadcam...

IN the beginning was Computervision. And Prime, and Competa and CIS, and the CAD Centre, and a few others. And it came to pass that Computervision coveted Competa.

But the High Lord Baker spoke and pronounced that never would the proud Competa fall to the dark powers from the land which some named America.

And it came to pass that the High Lord chose to forget his decree, and gave up Competa, even unto the hands of Prime. And many were the fallen.

And it came to pass that Computervision did devour CIS. But the warriors of CIS did battle mightily, and took unto themselves shares of the devouring giant.

And whilst these things were coming to pass, it did come to pass that Prime and ICL did meet in single combat to decide the fate of



eyes of Chilver, and ICL did say: "Verily, we do not appear to have gained much by our strivings at CAD Centre, and powers from the dark land do control its destiny."

And the High Lord Baker did look down on these things, and was sad. And whilst he wept, did the "Arabs come and carry off Quest Automation also."

And so it came to pass that the land of UK did come to have small reward for its strivings in Cadcam. Here endeth the first book of Cadcam.

Personal appeal

WITH shameless sexism, a Japanese company has come up with a novel way to peddle personal computers.

Paol of Tokyo is planning to sell the things on the doorstep by appealing to the undoubted charms of its sales ladies.

The company hopes to recruit 60 "Paol ladies" to sell hardware, including the NEC PC 8000 and Fujitsu's FM-7 personal machine.

The company, which also markets software, says that it will expect each of its girls to vend at least one of its personal computers a month.

This seems a modest enough target to begin with, and we bet at Computervision wish them well in their pioneering enterprise, although we cannot really condone the cynical, if harmless, tactic of taking the dignity of women in vain.

PC shock revelations...

I HAVE often thought that psychiatrists and marriage guidance counsellors would, in an ideal world, be replaced by a computer. Well, perhaps Utopia is closing in on us, at least if The Sun is to be taken seriously for once.

That cantankerous comic tells us of a scheme to give computer users confidence and interesting sex lives. "A personal computer in

the home is the ideal listener for people tormented by sex problems," we are informed.

Then, mysteriously the article adds: "There will be help for homosexuals."

Could it be that the PC plans to refresh parts that humans do not normally reach?

ComputerWeekly

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS

Thursday, June 30, 1983

It's time for an exam standard

"COMPUTER programmers are some of the best paid and most sought after people in the world and we can train you to become one. Sit for the internationally recognised City and Guilds range of qualifications."

That was the offer from a commercial training school in an advertisement challenged unsuccessfully by the British Computer Society. The school was challenged over the implication that a City and Guilds course can make the student a programmer with a widely recognised qualification.

The BCS and the Institute of Data Processing Management say a City and Guilds course is no guarantee of fame and fortune as a programmer. The qualification, they protest, is not generally accepted.

But the school says this is only because it is not sufficiently publicised. The school calls for some sort of industry standard entry qualification.

There is a horrendous mish-mash of "professional" examinations covering the computing industry.

There are City and Guilds courses. There are National Computing Centre courses for everyone from school leavers upwards.

The British Computer Society and Institute of Data Processing Management have rival examination courses. The Manpower Services Commission offers Tops courses for people who want to change career and try computing.

And there is constant argument over whether university graduates in computer science are worth taking on as trainee programmers.

Is it not about time a national standard was set at all levels of experience, from trainee onwards? That could impose a standard for commercial training schools - the centre of much controversy in the seventies - and help aspiring computer people break into the vicious circle of "no experience, therefore no job".

Keep Inmos, don't sell

"If you don't have a computer industry in your country in the information technology age, you won't have national security in your country."

Words similar to these were spoken to Industry Minister Ken Baker by Shiro Yoshikawa, an executive director of Fujitsu, during the course of the ICL crisis two years ago.

They would serve as a salutary text for contemplation as the government prepares to dispose of Inmos. The UK is 70 to 80% supplied by American companies for all our technology needs, which includes computers and electronics.

There is nothing inherently wrong with this. Our American commercial colleagues are more than well disposed to this country, as is their government in principle.

The problem is that this does not always work out in practice: US decisions on a policy towards the USSR often are not in line with either the UK perception of the problem, or indeed with the UK perception of what the solution should be.

Into the middle of this trap fall our companies which are dependent on US technology. Their component supplies can be held up by politically inspired bureaucracy in the US. The best policy in the light of all this is self-sufficiency, which is where Inmos comes in.

Self-sufficiency is just the kind of virtue that ought to recommend itself to a Conservative government, and retaining a major stake in Inmos, either by having a UK company buy it, or floating it on the Stock Exchange, is one vital part of self-sufficiency in the information technology age that we cannot afford to be without. Inmos has not instilled the kind of confidence one would like. But control, not abandonment, is what is called for.

A self-sufficient UK information technology industry would have made the current trade friction with the US a national matter, instead of the central issue it is.

Shiro Yoshikawa's Japanese countrymen have not made the same mistake, as that country now sees the birth of its first mainframe computer manufacturing company. Using a revamped UK owned Inmos as the foundation of a self-sufficient semiconductor industry would be a step in the right direction for the '80s.

THIS week's example of the strange things people say about computers was sent in by Frank Come of London, who writes ES.

Writing last year: "A duffer at maths and English will be able to become a computer programmer."

1984 and all that...

Daily Mail

LETTERS

Give software action fair coverage

THE article "Undeterred NOC plans D-11 sale" by Claire Gooding in last week's *Computer Weekly* raises an issue about what is fair press coverage of legal action in the computer software field.

You say "according to managing director Ritchie McGladdery, parts of RPL software were used in the D compiler, as well as in LEX-II which uses D".

As the original author of NOC Files, RPL-11, LEX-II and D-11, I am more qualified than Mr McGladdery or anyone else to say which of the above software is or is not a copy of other software. I am

also well aware of the 1956 Copyright Act, which I have read.

When FSS attempted to obtain an ex-parte interlocutory injunction to stop ACE from launching D at Compec last November, the judge ruled that FSS did not have an arguable case. Your article, however, says in its first sentence, that D-11 has a "legally murky future".

We suggest that your readers might, like us, wish to be influenced by a high court judge in these matters, rather than by the unimpressed speculation of your reporter.

We at ACE are very surprised to see references to this case in your paper, presented in such a way as might lead an uninformed reader to suppose that there was some credence in FSS's claims. We refute these claims entirely and believe that FSS's motives in continuing the argument in the press are just an attempt by a worried competitor to suppress the launch of our product which is a generation ahead of the one they market.

T. J. BARNARD
Managing director
ACE Microsystems
London W3.

Expertise is eroded

YOUR story "Production problems hit Kilostream users" (*Computer Weekly*, June 16) reminds me that automatic component insertion and wire wrapping were in use at GEC's old radio and TV works in Coventry (before it became part of GEC Electronics) in the late 1950s.

When GEC acquired Arnold Weinstock with the purchase of Sobel McMichael, he scrapped it in favour of female hand assembly.

at his old S/M plant in South Wales, and increased the ex-works cost of production.

This action would also result in loss of expertise and continued development of these production processes within the group of GEC companies.

What else can you expect from an accountant running an engineering company?

K.G.
(Name and address supplied)

Plessey micro based on 68000

WITH regard to your news item "Unix for Plessey", I would like to stress that the new Plessey micro is based on the Motorola 68000 chip and not the 68010.

The port of Unix was carried out on behalf of Plessey by Runt Computers.

JEREMY BIGGS
Press Agent
Root Computers.

The Editor welcomes letters commenting on subjects published in *Computer Weekly*, or on original topics. All letters must be accompanied by the writer's name and address, not necessarily for publication.

Irritating ads attract attention

WITH regard to Mr Lake's letter (*Computer Weekly*, June 9) complaining about too much "nudge-nudge" and too little "bye-bye" in Omnib's advertising, I can only console him that he, as well as I and other people connected with advertising, does not know exactly how advertising works.

We only know that if we stop advertising we usually stop selling. Bearing in mind also that the detailed brief behind a particular ad will vary rarely be obvious to the reader, it stands to reason that some ads will irritate on first impression. Which does not mean that they have not worked.

Think again, Mr Lake. Is not the intention of an advertisement to bring a product or service to the attention of a prospective buyer?

Any serious buyer would ask for more details instead of complaining that they were not in the ad. By those standards, in my opinion is that the ad worked.

DICK BARTON
The Pan-European Marketing Executive
Amsterdam
The Netherlands.

JULY 4th 1983 IS INDEPENDENCE OF AMERICA DAY



From today, Britain is totally independent of American microcomputer technology as Torch Computers launch a new range of products to fit the needs of everybody.

THE TORCH 300-SERIES
Two workstations to exploit the potential of TORCHNET Local Area Networking - the standard 301 model and the 303 with TOSCA Synchronous Communications.



THE TORCH C-SERIES
Torch's highly acclaimed communicating micro, improved and upgraded for today's market - the CP240.

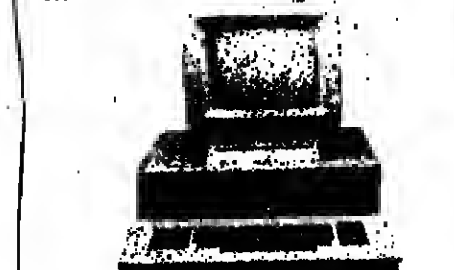
twin 400k floppy-disc colour machine, the CFS240 with



TOSCA Synchronous Communications, and the CH 20Mb hard disc models.

THE TORCH 700-SERIES
The ultimate business machines featuring triple-processor technology. The 705 Torch with 68000, Z80 and 6802 microprocessors offers the UNIX operating system, CP/M compatibility and twin floppy

disc drives, the 725 has a 20Mb hard disc.



THE TORCH Z-SERIES
Torch's unique upgrade for the BBC Model B micro, with enhanced software and CP/M-compatible operating system.

TORCHNET LOCAL AREA NETWORKING
The hardware and software required to link Torch computers into a fast and efficient Local Area Network, with special applications programs to fully utilise the net.

TORCHMAIL-PLUS
The second generation of Torch's sophisticated electronic mail system to exploit the British Telecom approved communicating microcomputers.

TORCH COMPUTERS BRING TOMORROW'S TECHNOLOGY TO TODAY'S NEEDS - THE BEST OF BRITISH INNOVATION TO OUTSHINE EVERY IMPORTED MACHINE.

TORCH COMPUTERS
Perfectly made in Britain.

Abberley House, Great Shelford, Cambridge CB2 5LQ
Telephone: (0223) 841111
Telex: 81884 TORCH G

PEOPLE



■ Martin Weldon (above) has been appointed network marketing manager for Massnet Systems International. He will be responsible for the European marketing support of Massnet, the company's high-speed networking facility. Weldon was previously European marketing manager for Network Systems Corporation.

■ Imagine Software, the Liverpool-based games software house, has appointed Bruce Edwards as general manager. He will be responsible for the organisation and co-ordination of the company's activities. He previously worked for Ladbroke's Laskys operation, and set up and ran its in-store chain of computer shops.

■ Distributed Systems, a computer consultancy specialising in the banking and insurance fields, has made two senior appointments. Andy Hazell has joined as manager of International Banking Systems. His responsibilities include providing development and support resources to international banking package users, as well as providing advice on improving systems performance. John Wright has joined as manager of Insurance Systems, from Hill Samuel Life, where he was systems director. His responsibility is to concentrate on expanding DSL's activities in the unit linked sector.

■ Sales growth has resulted in two new executive appointments by Kerridge Computer Company. Jerry Patterson has been made southern area manager, based at Newbury, and Mike LeRoy is now northern area manager in newly established offices on the Birchwood Science Park, Warrington. Both executives have wide experience in computer systems and have the responsibility of providing sales and customer services for Kerridge clients supplied with systems in specialised form.

■ Alan O'Neal has been appointed to Pete & Pam Computers' technical support department in London. O'Neal has four years' experience in chip technology.

■ Martin Hunt has been appointed market development manager for data communication products for Ericsson Information Systems. Since 1977 he has been technical services manager with Datassab, which was amalgamated with Ericsson. Michael Bearcraft has been promoted to market development manager for small business systems, Allaskop terminals and financial terminal systems for EIS. He joined the company in 1976 as a systems manager.

■ CASE has promoted Bob Rickwood (below) to international marketing manager with responsibility for export sales. He was most recently national sales manager for CASE's data communications products.



■ Mike Tait (below) has been appointed national sales manager for Commodore Business Machines (UK). He joins the company from LSI Computers where he was general manager, sales and marketing, for two years.



■ Learmonth and Burchett Management Systems has appointed Paul Noakes as associate director with responsibilities for government consulting projects, and Tony Webb as sales and marketing manager to promote the recently extended range of LBMS training courses and consulting services.

■ Malcolm Boothman has recently been made a director of Leda Computer Systems, a member of the Brysdale Group in Preston, Lancs. He joined the Brysdale Group three years ago and was previously general manager.

■ Following the formation of IMI Computing to provide a comprehensive computing service to customers outside as well as within the IMI group, Roger Authers has been appointed systems director, Michael Higman operations director and secretary, and Roy Pagett operational research director. Authers joined IMI in 1970 as a systems analyst, while Higman joined the former ICI Metals Division, now part of IMI, in 1954. Pagett has worked with IMI at Witton since 1968.

■ Dave Reid has been appointed Rapid Recall's product manager for Hewlett-Packard personal computers. Reid is responsible for the marketing and sales of all Hewlett-Packard Series 80, Series 100 and Series 200 personal computers, their peripherals and their accessories. In 1981 he joined Crelion also as Hewlett-Packard product manager, and was responsible for the HP85, 87 and 125 personal computers.

■ John Lane (below) has been appointed sales executive with the Irish office of AIM, with responsibility for the ICL PC2, including the general business system, and Videomanager, a new system for video libraries. Lane was previously accounts manager with Burroughs Machines.

■ Adatco Computer Services, specialist in turnkey solutions for the insurance broking market, has appointed Sandra Conway as customer support manager. Her responsibilities will include training and after-sales support. Conway joins Adatco from Sanderson Law and Company.

■ Terry Thomson, formerly business development manager with Intelligence UK, has been appointed director of Datalux, the microcomputer systems and software company recently appointed sole distributor for the Perkin-Elmer Modeler financial modelling software package.



■ Northern Telecom Data Systems has appointed Robert Ford (above) as director of finance and administration, Europe. Reporting direct to the vice-president, Europe, he is responsible for the finance, planning and administration of all company activities in the nine European countries from which it operates. Ford brings extensive experience of European operations of international companies to his post. He has spent the majority of the last 10 years working on the Continent, and is fluent in Italian, French and Dutch. Most recently, as divisional controller of Dresser Industries' industrial products division, he was based in Brussels for two years.

DIARY

JULY 5

Computer Use in Small Hotels. Run by Middlesex Polytechnic, it takes place in Hendon, London. Cost is £55. Details from Carol Moon, 01-202 6545.

JULY 11-15

Practical Project Leadership, at the Swan's Nest, Stratford-upon-Avon, is divided into two, one-week modules. The first deals with the practicalities of controlling and organising project teams. Cost is £450. The second, from July 18-22, looks at leadership styles, motivation and communication. Fee is £495. Both weeks booked at once cost £880. Details from John Matchett Ltd, (0295) 56161.

JULY 12, 13

Viewdata Systems is a briefing seminar for management given by consultant Langton Information Systems. Organised by NCC, the venue is the London Tara Hotel and cost is £270 for NCC members, £306.67 for non-members. Further details from NCC, (061) 228 6333.

JULY 21

Unix for Managers at St Ermin's Hotel, London, is designed to give an overview of Unix. Details from Bleasdale Computer Systems, 01-828 6661.

AUGUST 8-12

Introduction to Organisation

CONFERENCES

■ THIR 58th International Data Security Workshop takes place at the Hotel Zurich, Zurich, Switzerland, from July 11-14. Organised by the International Association for Computer Systems Security and Data Security Workshops, the workshop will comprise 19 sessions covering subjects such as controls for dealing with security problems of distributed processing, computer facilities support, personnel controls, communications security, legal and physical access controls of programs and data, etc. Details of the Computer Systems Security Professional registration program and the exhibitors are available from the organisers.

and Methods is designed for those involved in administration or management who need to review current systems. It takes place at the Henry VIII Hotel, London. Course places at £510 may be booked through the course registrar, Cherry Bignmore, on 01-261 9237.

SEPTEMBER 5-16

Part one of the Urwick Management Programme, called Coping with Change, takes place at the Urwick Management Centre, Slough. The course is run in conjunction with a second, two-week course called Getting Results. For both is £1,600. Several other dates during this year and next have also been set for this course and many other management development and training courses. Details from Urwick, (0753) 34111.

SEPTEMBER 7

Prestel and Teletext for the User, a course organised by the Institute of Information Scientists, it is to be held at Manchester Polytechnic from 9.15am to 5pm. Cost is £20.70, including VAT. Further information and booking forms can be obtained from G. Turner, CIBA-GEIGY plc, (061) 872 2323.

IACSS in Europe will also be highlighted. Further information from the Registrar, IACSS, Six Swarthmore Lane, Oak Hills, New York 11746, USA. Tel: (516) 499 1610. Telex: 143245 OPDASEC.

■ AUTUMN seminars from Frost and Sullivan are starting with Data Communications for Microcomputers, which is being held at the Park Lane Hotel, London, on September 1 and 2. Seminar leader will be Terry Poy, vice-president of International Management Services. Cost is £285, plus VAT. Details from Frost and Sullivan Ltd, London.

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- Give you free software training
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Our fully supported, completely standard 32-bit Edition VII*, probably the world's best timesharing system.

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with the industry's highest maximum throughput of up to 64MB/sec, upward compatibility throughout the range and everything else you need to develop and support the best solutions - rapidly, easily, securely, profitably.

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UNIX is a trademark of AT&T Laboratories. The software package of Workbench Computer.

THE AUTUMN COMPUTER TRADE FORUM

4th-7th October, 1983
National Exhibition Centre, Birmingham,

Sound business sense for volume buyers

The Autumn Computer Trade Forum is the UK's largest and most successful trade event and the only show that fully understands the needs of volume buyers. It offers you a comprehensive display of minis, micros, software and peripherals in an environment that's specially made for volume business.

Who is CTF for?

Distributors, Dealers, Software houses, Systems Integrators, Retailers, OEMs. In fact anyone who makes a living buying and selling computers, software and peripherals. So whether you're new to DP/WP or know the business backwards, CTF is the event you mustn't miss.

How can CTF help you sell more?

The exhibitors at the Computer Trade Forum understand your needs. That means they'll be talking your language. Quantity terms. Discounts. Marketing support programmes. Delivery schedules. The whole range of services to help you sell more.

Who will be at CTF?

Texas Instruments. Logica. DEC. Systems. DRG. Zygal. Motorola... and many more! And for every name you know there'll be many you don't - with products that could well be your next year's big seller.

Why CTF is different!

The Computer Trade Forum is the only show that understands what volume buying really means. The atmosphere, the choice of exhibitors, the absence of

razmatazz are all designed for profitable business.

CTF has been specifically designed for you and as a proven, established national event it offers you even more with the support of leading UK suppliers.

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The general public is not invited to CTF. The emphasis is on volume business. And for you it's free! Just fill in the coupon and we'll send you free tickets (worth £3.00 each) by return of post.

If you need to know more, call 01-747 3131.

Computer Trade Forum:
232 Acton Lane, London W4 5DL

Please send me ☐ free tickets for myself and colleague.

Name

Position

Company

Address

☐ I am interested in exhibiting at CTF (No one under 18 eligible)

How an award winning system revived the fortunes of Leyland Trucks

Comserv's AMAPS has helped bring a 'revolution' in plant, products and attitudes . . . Mike Waller reports



"Leyland Trucks is good for AMAPS, and AMAPS is good for Leyland Trucks."

WHEN 1980 dawned every European heavy truck manufacturer was suffering; the world was entering recession; everyone's market was collapsing.

For Leyland Trucks it was even tougher. In addition to the market problems, they had an additional competitive burden in the flailing exchange rate of an oil-supported £-sterling.

Changing markets demand new approaches. To achieve greater flexibility and quicker response the top management of Leyland Trucks decided to sub-divide their group into units which, although still sizeable, were smaller and more manageable. Local management was then given targets and a wide autonomy — and told to get on with it.

With annual sales of over \$500 million, and employing around 12,000 people in its headquarters and six plants, Leyland Trucks is a big company by any standards. The sub-division and the subsequent delegation of authority was crucial. Only in this way, with each of those plants enjoying considerable autonomy, could they have initiated the total revolution in plant, products, managerial approach and workforce attitudes which have come about in the last two years.

So in five of its plants, Leyland is installing Comserv's Datapro award-winning Advanced Manufacturing and Production System (AMAPS). Those five are the engine and assembly plants at Leyland in Lancashire, which make cab and chassis trucks from 10 to 40 tonnes for the domestic and European markets; the engine and assembly plants at Baitigate, near Edinburgh, which make a similar size range but predominantly for export; and Albion works, near Glasgow, which supplies the others with axles and gear boxes.

"The rate of change has been incredible in plant, in products and in attitude. In a few short years we have built both the most modern truck assembly plant in Europe, and our own test track and technical centre to go with it. We have also designed and launched a completely new modular family of trucks. But it is not only the plants and products that are being revolutionised — so are all our attitudes. The educational change is just as significant as the technical."

"Installing a business management system is a very complex undertaking and represents a major commitment in that educational load. We were certainly looking for all the help we could get and one of the major attractions of Comserv was

its commitment to education and training. We not only have to explain to people what we are doing and why; we have to make sure we are getting the message across. They must be clear how it will affect them and understand what we mean when we talk of MRP/II and therefore why, for instance, we have suddenly closed off stores to which they have had ready access for years."

"We have been working a form of MRP since the 1960s, and the difference has to be explained. So,

We not only have to explain to people what we are doing and why; we have to make sure we are getting the message across. They must be clear how it will affect them and understand what we mean when we talk of MRP/II

once the decision was made, the whole programme was first made a subject at one of our regular management conferences when Ian McKinnon, our manufacturing director, made a presentation to some 300 senior and middle managers. It has since been extended through both union and junior management channels. By the time we have finished, everyone on the payroll will have heard about the values and whistles of MRP/II. It really is a tremendous programme, and Comserv has given us excellent training support throughout."

Thus Gordon Lindsay, systems director, when explaining the background to the adoption of MRP/II.

"When did it all start? It was back in November 1981. We knew we needed a change and, while I was in the States, I was impressed by one or two companies and the way they managed their businesses. It was the first time I had heard of MRP/II so I went on a short course to convince myself. Then, when I came back, I convinced our senior management."

"Were they difficult to persuade? Not really. If you can get to the right level and talk sensibly it can be quite quick. In Leyland Trucks that is not difficult; most decisions rest with local management. We only had to look at our competitive position — costs too high, lead times too long, inventory from wall-to-wall, to know that something had to be done."

"Our present system is really an order launching device. We then wait for shortages to appear and

chase hell out of everybody. The decision to change was taken early in 1982 with the aim of doubling our rate of inventory turn within four years."

With the commitment to MRP/II established, software selection was the key factor. A six-man project team was set up consisting of a senior manufacturing man from each of the five interested plants plus Mike Goldie, manufacturing systems manager.

Says Goldie: "With plant autonomy as it is, each could easily

have gone its different way; there was no way that I could have overridden them. Fortunately, they didn't want to. The decision was unanimous."

"We made a thoroughly professional job of the selection. We first agreed a lengthy list of questions that each of the contending software packages would have to answer. Then each plant assessed, on a scale of 1-10, the importance to themselves of each of those questions. Each of the four contestants was then similarly marked to show how well we felt each question would be answered."

"When the final totals were calculated Comserv won easily."

"But this was all theoretical and, there being no European installations, we visited a number of users in the States for practical confirmation. And we became even more convinced."

"We liked Comserv's commitment to providing training. We admired its courage in showing us both its success stories and where it had had problems. Everything it did was very professional. And so the decision was made."

"The selection process took eight weeks in all. We underestimated one problem. We need all five factories to use standard software to cut down on systems maintenance and standardise on factory operating methods. However each factory has its own implementation plan and needs to move at its own speed. Each must therefore be able to update its own database as required without interfering elsewhere. But everything seems under control now."

"Bob Kyle, now materials manager, Leyland Assembly Plant,

and a member of the original project team, is responsible for the switchover to AMAPS for one of the two Lancashire factories. "I believe in implementation being aggressive — almost in taking the props away — although that wouldn't be wise with AMAPS. But this system is only a part of our main problem which is to train a lot of people over a length of time and change the way they work and the way they think."

"AMAPS is a tool, a very powerful tool, and one that we must have to manage the rate of change that we need for us to survive and make good profits. But get it in perspective — while we've been grappling with that we've also made over 1,000 machine tool moves and entered a totally new ball game. This year alone we've computerised the stores in our engines plant as well as implementing various assembly line control systems."

"The project teams are made up solely from our own operating people — that's how we learn — but they all have other jobs as well, so nothing has been accomplished except by tremendous enthusiasm and hard work from them and many others. When I was in the States, Dick Ling said to me 'Don't get excited about your new MRP/II system; get excited about the old one. Get that one working properly and then migrate to the new'. He's right; you can always improve what you've already got."

"Even before AMAPS we've taken £7 million — that's nearly a third — out of our inventory, and we've done it because people are beginning to talk MRP/II, to listen to us and give us the chance to show what can be done. We've improved our accuracies on stores and BOM quite a bit and stores haven't stopped the trucks for six months."

"The AMAPS BOM module has been installed for a week and is now waiting for data to be entered. The project team will start the entering so that they know what it's like; and the engineers will complete it to give us a large real database. You can train Leyland people better on Leyland data. But once that's in, subsequent modules can be tested on a relatively small input."

"We'll run AMAPS and the existing system in parallel, moving the present status points where necessary, and use the enhanced power of AMAPS to improve the current system so that the reporting is the same. This should give us about as near-perfect a cutover as you are going to get."

"The other trick we have to pull is to detune AMAPS to fit our situation. What we are buying is an excessively robust system and very, very good training and back-up. I'm considerably impressed with everything I've seen; they're something different. But AMAPS is enormously powerful, and can be used in almost any environment. There's no point in using all the bells and whistles just because they are there

things to the outside observer is the speed with which the original idea is being turned into reality. Clearly this comes from total involvement throughout, starting right from the top, but how well so comprehensively sold? "We got our timing right. Leyland Trucks was making massive changes, reducing vertical integration, breaking the group down into smaller units. We were brutally aware of our market position."

"We started by listing our current business problems and realised that if we were to survive we would have to do so through a period of enormous change. This led us immediately to the question: 'How do we manage change?' That in its turn led us to MRP/II as the tool which would enable us to manage it; which would bring all our resources together as part of a single system working to a single plan."

"Given that, we knew that it would give us the means to control our inventory and revenue and thus our cash flow."

"The other overriding impression is of high morale and burning enthusiasm — not necessarily an automatic accompaniment to sweeping changes in management policy."

How did this happen at Leyland? Let's leave the last word

AMAPS is enormously powerful and can be used in almost any environment. There's no point in using all the bells and whistles just because they are there

the same information.

"Secondly, because that information is more immediately available, and more accurate, the quality of decisions will be better."

"But thirdly, and almost certainly the most important, AMAPS allows you to simulate — allows you to determine that the plan is achievable. Too often in the past we have had a marvellous plan which was never actually attainable. But the benefits of simulation, of knowing that what is proposed is possible, go right up to the executive committee which regularly reviews the immediate past and the coming 12 months. That's where the really important decisions are made and the information they are working with is the distillation of many lower level meetings, all of which will have been helped by AMAPS."

"It is claimed that MRP/II improves the quality of life. It could be right."

One of the most impressive

viewdata has become a data processing art with many kinds of exponent. As well as companies like British Telecom and IBM, which have the resources to fund a prestigious but not particularly profitable service, there are a number of smaller concerns which are doing very well out of viewdata alone.

Customers for viewdata now include nationalised industries such as British Leyland; chain stores like Debenhams; universities; some public authorities; and an increasing sector of the travel industry. The involvement of travel agents may do more than anything else to convince cynics that viewdata has some commercial value, since the margins in the travel and holiday business are notoriously slender.

Viewdata is best seen as being software. More precisely, it is an operating system particularly suitable for untrained users. Most viewdata packages use a super-set of the Prestel syntax established by British Telecom.

Although the heart of the system will probably be a mainframe or minicomputer, the terminals provided for end users are usually specially adapted domestic television sets. Communications between the terminal and the central database use a variety of technologies, but for viewdata systems with terminals at remote sites British Telecom lines will probably be used.

For a user who already has some sort of mainframe computer, the hardware required to set up a viewdata system need not be expensive. A viewdata terminal can be installed anywhere there is access to an electrical wall socket and a telephone line. In fact, the terminal can be carried around in the back of a car and set up within minutes wherever it is required.

Just as the equipment required for a viewdata system is simple, so the applications for it are straightforward. Many involve displaying lists of information. For instance, the Stock Exchange's Topic system consists of constantly updated lists of share prices. For this kind of application, viewdata's use of colour television monitors is significant as programmes and other graphic displays can be presented.

The Stock Exchange traditionally displayed rising prices in red, and this is easily imitated in Topic listings.

Viewdata has much to offer in the automated office too. Electronic mail, the office diary and telephone directory are all being managed on viewdata. In these applications viewdata

VIDEOTEX

Was British Telecom wrong to make Prestel too domestic?

Michael Thatcher thinks so and he believes BT has trivialised viewdata almost down to the level of space invaders

NEW forms of information technology can have had such an unfortunate start in life as viewdata. Seen by one section of the data processing industry as being hopelessly shrouded in mystique, it was regarded by others as an invention in search of a market.

Suppliers of viewdata were partly responsible for this. Some sold cumbersome and costly "black box" solutions, relying on obscure computer equipment. In contrast, British Telecom, which set up the most widely available system, Prestel, insisted on portraying it as a service for domestic users. This trivialisation by British Telecom led, in the words of one industry spokesman, to viewdata being regarded by many data processing professionals as something on a par with space invaders.

In fact viewdata has become a data processing art with many kinds of exponent. As well as companies like British Telecom and IBM, which have the resources to fund a prestigious but not particularly profitable service, there are a number of smaller concerns which are doing very well out of viewdata alone.

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BT hoped Prestel would be used in the evening by families and by people working at home.

yields similar benefits to other networked computer-based solutions — it frees users from dependence on paper and allows information to be transmitted quickly in an easily assimilable form.

In some cases where traditional methods using paper are too slow, viewdata may provide the most cost-effective solution to communication problems. For instance, a project being developed by Allied Breweries used viewdata to transmit vital information about production processes from regional breweries to the headquarters in Burton-on-Trent. Previously, this information was printed out, transported by van from each brewery. Delays in receiving and analysing reports could have had disastrous consequences for control of the very large quantities of beer being produced at the regional breweries.

Viewdata can be seen as a user-friendly operating system using familiar and easily available equipment. It can be made more sophisticated, however, by substituting a microcomputer for the "dumb" TV monitor, users can manipulate the data in the database locally. More frequently, the viewdata system is no more than an attractive menu for applications running on the central computer.

A practical approach to delivering such systems is found in the viewdata package supplied by Computex, which allows users to leave a frame of information, enter and use a program, and then return to the frame again. In this, users may be unaware of the sophistication of what they are doing, since Computex uses the same Prestel-like syntax for all

operations in its own standard applications, and supplies users with a library of source code which enables them to write their own applications in exactly the same way.

Since a database may be accessed by a routine no more complex than dialling a telephone number, problems of security will inevitably arise. This can be got round by using closed user groups, each with its own password — a user who doesn't know the password doesn't get access to certain files.

A more sophisticated method, again from Computex, uses the concept of multi-databases. A particular user will only be aware of the files which he or she is authorised to access, as the system builds menus dynamically for each user.

For instance, if the user is not permitted to view the personnel

file, then this file will simply not appear on the menu which is presented when signing on.

At first sight it may be difficult to see why there has been such a deeply entrenched resistance to viewdata among the data processing fraternity. One explanation may have been the relative failure of Prestel in its early days. Dick Howe, marketing manager of Modcomp, which supplied the Stock Exchange's Topic system, attributes Prestel's failure to BT's insistence on selling it as a domestic service.

BT's rationale was that it already had all the telecommunications traffic it could handle during peak business hours. It was hoped that Prestel would be used in the evening by families and by people working at home. In this way, the chance of selling it as a

serious business tool was lost. Unfortunately, suppliers of private viewdata systems found that their products were being seen in the same bad light as British Telecom's trivialised offering.

Determined marketing and the establishment of in-house viewdata systems in the key areas of vehicle dealers (Areggon, Redifon and Computex) and travel agents (Computex and Thomsous) have helped restore viewdata's lost prestige in the eyes of potential users. But a second line of resistance was encountered from within data processing departments.

Data processing managers who remembered the problems involved in installing other DTP systems fought tooth and nail to resist the introduction of a new online service which could only make users more demanding.

It may be wrong to regard viewdata as something fundamentally different from other forms of data processing. At the heart of each viewdata system there is a computer which is quite capable of running other applications.

Prospective purchasers of a viewdata system should bear in mind that first and foremost they are buying a computer, and they should be thinking in terms of what else they can do with the machine. How easy will it be to upgrade the computer if their viewdata network needs to expand? What software is available for the machine, apart from the viewdata package? What operating system does the computer use, and how easy will it be to develop other applications for it? Finally, if at any time the machine needs to be disposed of, will anybody else be interested in buying it?

Redifusion's Viewdata Plus system may have suffered as a result of the hardware it required, as potential users may have been put off by the choice of such an obscure machine, despite substantial subsidies paid to pioneer users by the Department of Industry.

ICL and IBM played it safer by offering their products on widely accepted machines like the M220 and Series 1. Areggon and Computex both chose DEC systems. Mars Group Services may have put itself at a disadvantage by going for a "Systems Instruments" kit. At £19,500 for the smallest system, TI suffers by comparison with a similar sized DEC machine at £12,000. Also, TI has nothing to compare with the machines at the top of the DEC range for users who want to expand their systems.

The mystique of viewdata can only be aggravated by anomalies in the way charges are imposed by certain viewdata suppliers. While Computex and Mars sell or licence their software outright to users, Areggon, Marel and others charge users according to the number of terminals they intend to run on their viewdata software. This is rather like charging customers for a word processing package on the basis of the number of workstations they intend to use with it, and makes the largest system very costly.

There are now said to be over one hundred private viewdata systems established in the UK. Some were sold as packages including the hardware, others as software to run on top of the customers' existing data processing facilities.

Banks and other financial institutions, which initially were put off viewdata because of Prestel, are at last beginning to show an interest.

With the capitulation of the banks, viewdata may at last find full acceptance by the community.



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COMPUTASTARS FOURTH REGIONAL HEAT

Heywood and Lambeth inch ahead for joint men's win

BARNESLEY: a name to conjure with. A town deserving of international recognition for two things - Michael Parkinson and his ego. Now comes a third claim to fame - the northern heat of the DP Olympics was held there on Saturday.

The last Computastars heat before the UK final next month burst upon an unsuspecting Yorkshire with the medicine ball throw. Yes, for the third meeting running, the competitors faced the same programme. After years of expecting the unexpected, the athletes finally met it in the form of unchanged events. Those practising for the naked mud wrestling were to be disappointed.

And in the medicine ball it was the first teams from Data 100 and Heywood & Partners which tied for first place in the men's heat, with the former's number one, Alan Meaning, beating the latter's champion, Bill Edwards, into second place.

Barclays Radbrooke Hall and its number one, Liz Porter, took the first of no fewer than five team and individual first places in the women's competition, relegating Crawford and Alison Forsshaw to second.

One of the joys of the hockey dribbling course is that it is very long, a fact not appreciated by most competitors - until, that is, they wheeze past the finishing post. Another tie here, with Crawford's men getting revenge for their earlier defeat and sharing first place with the NCC. Data 100's Alan Meaning made it two in a row with victory in the individual competition.

In the women's section it was

again Liz Porter and Barclays winning, but Reckitt & Colman forced a tie for the team title.

Like most things that look easy, the standing long jump isn't. Giving a fine display of simplistic conceptual visualising was Heywood & Partners in the men's, with Sheffield Insulating second, and Heywood's number one, Bill

Robert Hurst in the individual competition.

Victory in the sprints saw Barclays' women's team with a handsome 30-point lead at the break, with Liz Porter pulling steadily away from the rest of the field.

Crawford 1 led the men's competition, five points clear of Rowntree Mackintosh 1, with Rowntree 2 three points behind.

Suitably refreshed after lunch was Heywood 1, heating London Borough of Lambeth in the 100 metres. Bill Edwards notched up his second victory of the day, with Geoff Clarke and Tim Brandreth being the runners up.

And surprise, surprise, it was the women from Barclays who carried on the way they had finished the morning session, taking victory in both team and individual sections.

The football dribbling managed, as usual, to eliminate several competitors who strayed out of bounds. It's usually those who really fancy themselves as footballers who fall foul of this one, due to overconfidence.

Heywood was not among these, nor was Barclays. Nor the women from Rowntree. Others weren't so lucky.

Now, my personal favourite event has to be the sit ups. I am eternally grateful that I don't have to do it - it's painful enough just watching. Gritting their teeth were the little lads from London, Lambeth. Number one Geoff Clarke scored a frightening 74, making sure of the team and individual

first places. Things weren't so clear-cut in the ladies' with Barclays and Crawford tying on 30 points, but it was again Liz Porter who won through in the individual contest.

And so, with one event remaining, it was Lambeth in front, leading Heywood by just three points. Barclays' women were well away, holding an unassailable 53-point lead over Crawford.

But a splendid performance by Crawford's first team in the men's 1,600 metres saw Heywood 1 and Lambeth relegated to second and third respectively, the end result being a tie for first place between Heywood 1 and Lambeth on 251 points. Crawford was next with 248. You can't get a lot closer than that.

Crawford's Robert Hurst beat Bill Edwards from Heywood's by 97 points to 91, and Liz Porter triumphed over Kathryn Gray with 94 points to the Rowntree champion's 79.

There was nothing close about the ladies' team result. Barclays scored a massive 279, compared with second placed Crawford's 196.

Due to the close competition in the men's teams, the top six go through to the UK final on July 23.

Gordon Cairns informs me that he is to select additional teams from the qualifying heats to join them there. So if you only just missed in your heat, you may be hearing from him and get the chance of a lifetime - meeting me at Birmingham. See you there.

Report and pictures by Andrew Thomas

MEN'S TEAMS

Rank	Name	Points	Total
1	Heywood & Partners 1	31	27
2	L. B. Lambeth	25	21
3	Crawford Computing 1	28	35
4	Rowntree Mackintosh 1	27	28
5	Barclays Radbrooke	26	30
6	Rowntree Mackintosh 2	34	30
7	Crawford Computing 2	23	22
8	Data 100 1	31	28
9	Sheffield Insulating	28	19
10	Rowntree Mackintosh 3	23	27
11	Data 100 2	24	18
12	NCC	24	13
13	Crawford Computing 3	20	28
14	Babco Record Tools	15	21
15	Computerskills	22	15
16	Heywood & Partners	24	17
17	Computer Data Systems	24	31
18	National Water Council	22	25
19	Data General	18	19

MEN'S INDIVIDUAL

Rank	Name	Points	Total
1	Robert Hurst	9	13
2	Bill Edwards	10	10
3	Timothy Brandreth	9	13
4	Geoff Clarke	7	13
5	Dave Cole	7	13
6	Mike Hawtree	7	11
7	Alan Meaning	14	14
8	Mike Milne	7	9
9	Derek Gaudier	8	12
10	Dave Bruce	7	9
11	Paul Wise	7	9
12	Gordon Algeo	7	11
13	Paul Wilson	9	11
14	Kath Taylor	7	8
15	Chris Adenbrooke	6	9
16	Peter Williamson	6	12
17	John Wainman	5	12
18	Steven Beaumont	5	8
19	John Leyland	5	5

WOMEN'S TEAMS

Rank	Name	Points	Total
1	Barclays Radbrooke	32	36
2	Crawford Computing	28	22
3	Reckitt & Colman	19	36
4	Rowntree Mackintosh	27	25
5	Heywood & Partners	11	17

WOMEN'S INDIVIDUAL

Rank	Name	Points	Total
1	Liz Porter	10	15
2	Kathryn Gray	5	14
3	Alison Forsshaw	10	7
4	Dawn Gillingham	8	14
5	Jane Harrison	4	5

From left to right: Medicine ball, hockey, long jump, team sprint, 100 metres, football, sit-ups, 1,600 metres. Top six in ladies' go through to the UK final. 5 denotes a small heat size.



Sponsored by Computer Weekly.

Edwards, beating Crawford's Robert Hurst in the individual.

Reckitt & Colman took first place in the ladies' beating Barclays by a single point.

The last event before lunch was the team sprints, new this year and already a firm favourite. I like watching it anyway, although I suspect that actually doing it might be a different matter. It was Rowntree Mackintosh 1 which had most reason to enjoy it, with Crawford having to make do with a small crumb (sorry) of consolation in sharing second place with Rowntree's third team.

Rowntree 1 champion Tim Brandreth beat Dave Bruce and



Robert Hurst wins the 1,600 metres - and the individual title.



Liz Porter appears to be dying in the sit ups, but it didn't stop her winning the individual competition.



I was all too much for some competitors.



Mike Hawtree throws the medicine ball - no extra marks for pulling faces.



Jane Harrison in the hunt-the-contact lens event.



Rowntree Mackintosh 1 captain Andrew Normandale heads off for yet another sprint.



Maria May thinks about doing another sit up.

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J049

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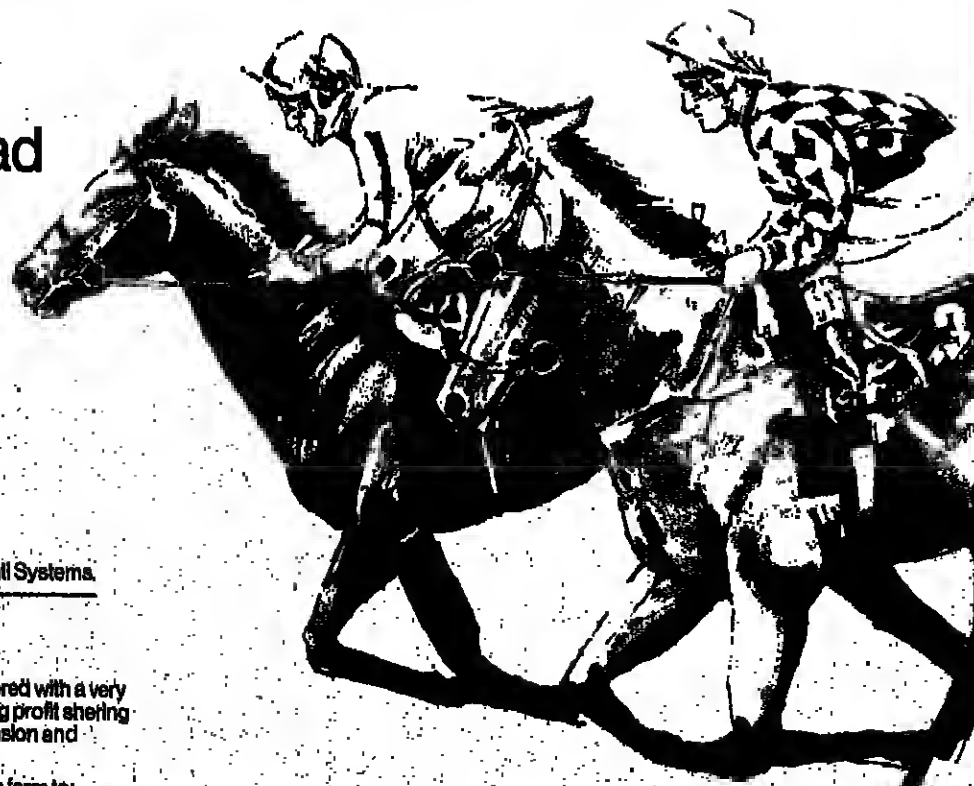
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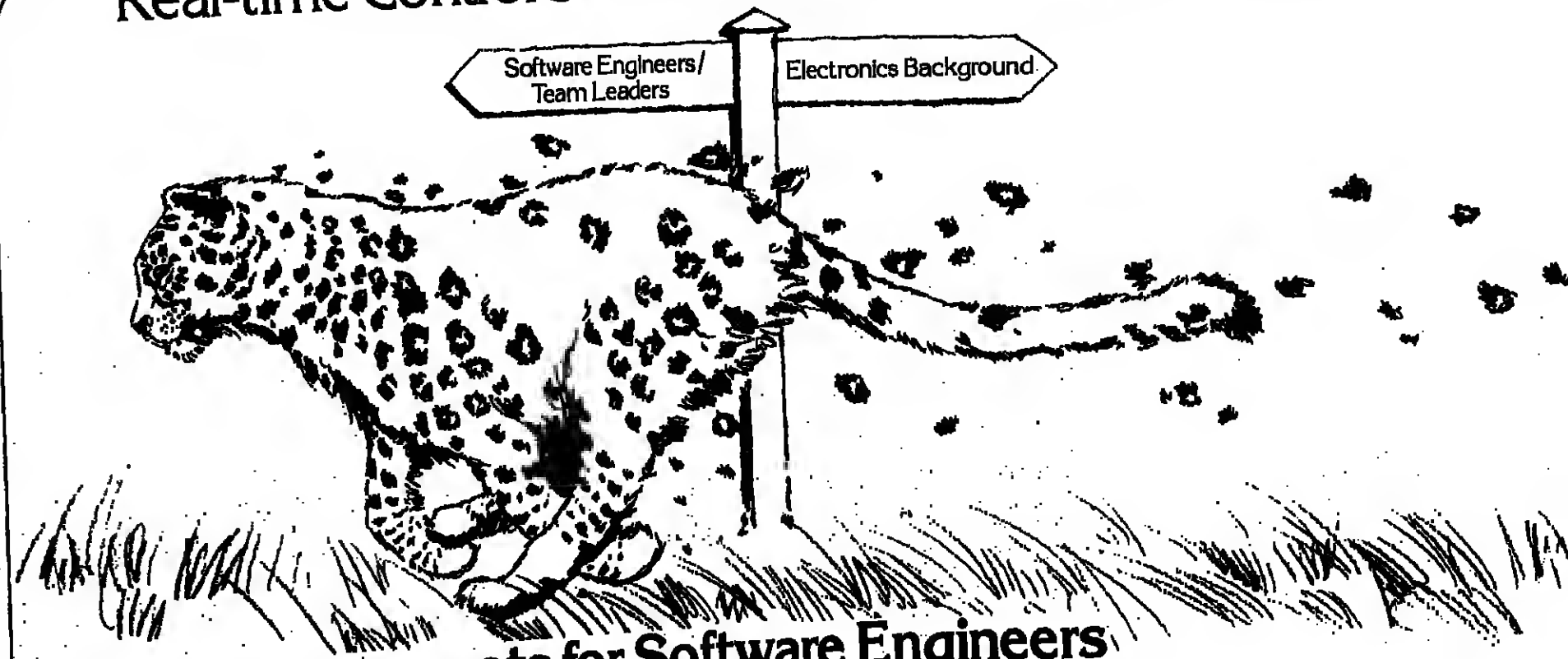
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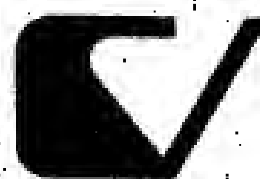
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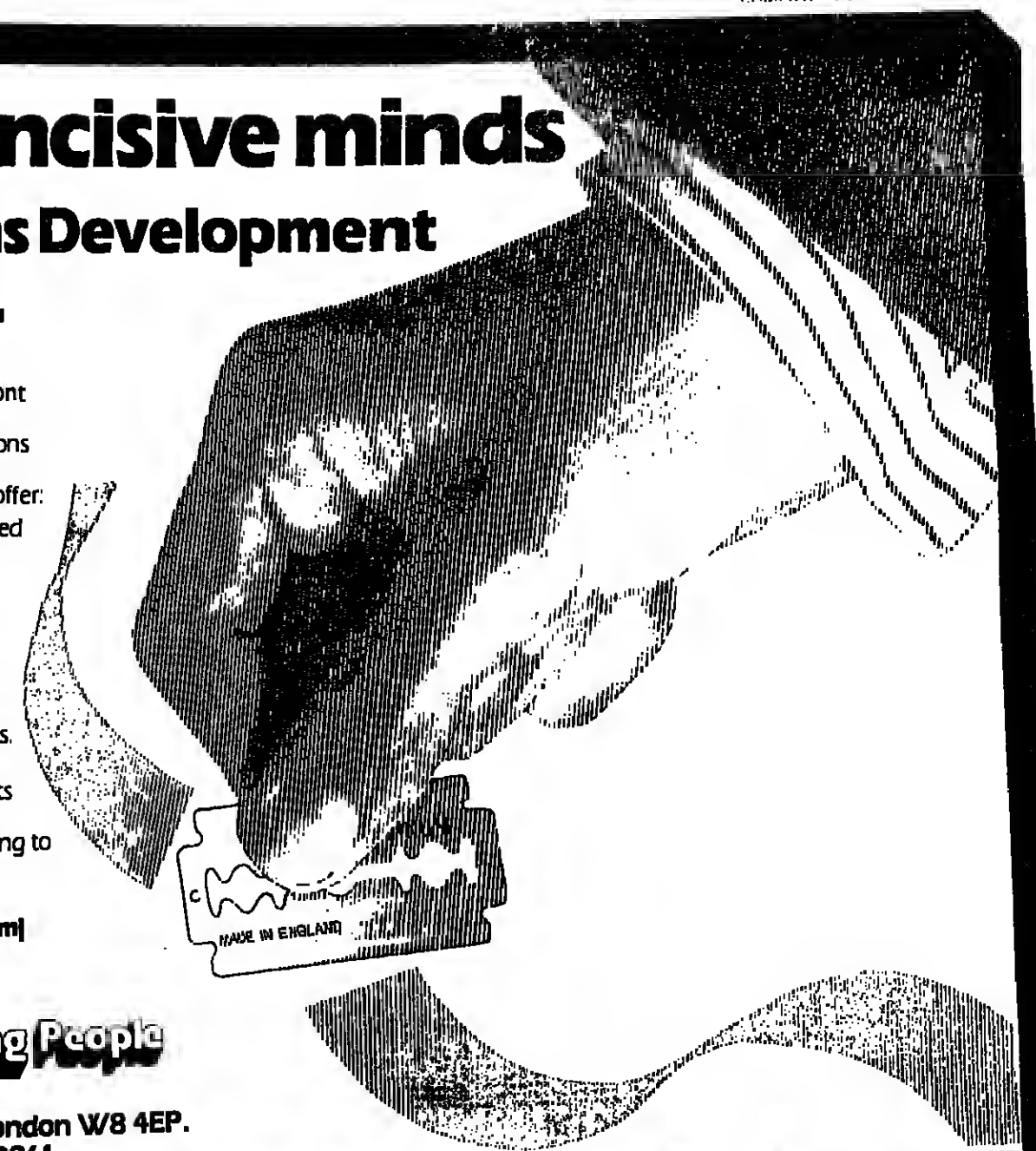
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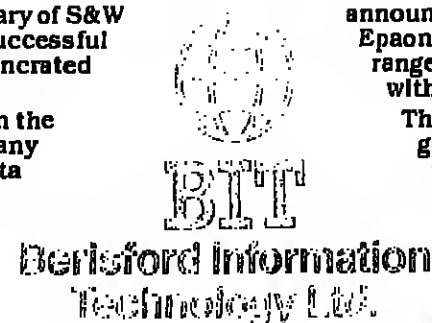
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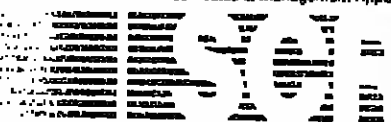
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This company, a major force in the International Insurance Markets, is currently seeking Analyst/Programmers and Systems Designers to work on their IBM mainframes in the City. Your COBOL or PL1 programming background combined with some experience of Analysis and/or design will command a salary of up to £13,000. Ref. A2

IMS OR CICS? £9,000-£13,500

Our client, based in West London/Middlesex utilises dual IBM mainframes and is seeking to recruit IMS or CICS Analyst/Programmers for a variety of development projects scheduled for 1983/4. COBOL, PL1 and APL are all used within the data processing department and a minimum of two years' programming expertise with IMS or CICS is required in order to enjoy the numerous company benefits offered by our client. Ref. D1

COBOL PROGS & ANALYST/PROGS £7,000-£11,000

The systems development team within this successful London based company is currently expanding in order to meet demand from its UK subsidiaries. Hence our client is seeking to recruit a number of COBOL professionals keen to progress their career in an interactive, database environment. Candidates should possess a minimum of 18 months' mini or mainframe COBOL. You will be given the opportunity to join a friendly team within a challenging environment and learn new techniques. Ref. D2

These are just some of the career opportunities that we are currently assisting our clients to fill. We would be pleased to talk to you regarding these and many other vacancies that we are currently aware of. Telephone one of our consultants to discuss your particular requirement and how DP Selection can help you.

SENIOR IBM PROGRAMMERS To £13,000

This dynamic Services organisation based on the Bucks/Berks border is seeking to appoint several Senior Programmers offering at least two years' experience in PL1, 370/303, COBOL or 6100 COBOL. Applicants should possess knowledge of Database and/or TP and be confident to assume responsibility for small projects when required. Self-motivated individuals will enjoy the fast moving environment and be rewarded with high salaries and quick promotion. Ref. K1

YOUR 2nd JOB To £10,000

With at least two years' COBOL programming experience, our client can offer applicants an excellent career move into an Analyst/Programmer role at their IBM 4331 DOS/VSE installation in NORTH SURREY. Good IBM knowledge, experience of VSAM and the ability to liaise competently with users will provide you with the opportunity to join a stimulating DP environment working on Stock and Financial Recording systems. A good range of benefits also apply. Ref. K2

SYSTEMS ANALYSTS - YOUR NEXT PROJECT

If you can offer at least two years' commercially based systems analysis experience then our client, a very successful financial organisation, could offer you the opportunity to join an on-line, distributed processing system development based upon very powerful mini linked to a mainframe. Career development to the business analyst role exists and a commensurate salary of c£10,000 can be expected for this company based in NORTH SURREY. Ref. R1

COBOL, CICS & DL/1 To £10,000

Our client, located in the CITY OF LONDON, is seeking to recruit PROGRAMMERS or JUNIOR PROGRAMMER/ANALYSTS to join their CICS DL/1 project environment. The people appointed can look forward to gaining exposure to program design and analysis to provide them with career progression. If you can offer around two years' COBOL then telephone us now to progress an application. Ref. R2

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ART...

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To complete their first phase of expansion they now seek two highly motivated individuals capable of integrating fully into small and friendly project teams. The products that you will be involved in manage databases of graphics and convert CAD and scanned illustrations to publishing devices.

IBM Fortran is essential with IBM VM CMS and OS preferred. Any experience in IBM Assembler and DEC VAX would be advantageous.

It is envisaged that for the right person joining as an Analyst/Programmer there would be early promotion to Project Leader.

At the Programmer level opportunities already exist for dedicated professionals to gain greater responsibility.

(43751)

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John Libbey &
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Central London

To £17K

CAP's Industrial Branch in London is currently engaged in developing software for a number of highly innovative applications for the communications industry. Examples of these applications are Electronic Post or systems involving real time data acquisition. We are looking for staff with at least 8 years software experience of large commercial or industrial systems, preferably in BT or the communications industry, to assist with these projects and in marketing and selling. Good design experience is essential, together with an awareness of developments in communications fields, such as standards (OSI, X25 etc.) LANs, office automation etc. CAP is a stimulating company in which to work, and boost your career. We have developed robust methodologies for analysis, design and development of software and are currently engaged in a number of software productivity innovations. Ref. MB 2/01

ANALYST/PROGRAMMER

An opportunity for influence and involvement

Salary £9-£10,500

We are an established, small bureau looking for an experienced analyst/programmer to take charge of all development work on new systems, communications with client sites and for internal accounting and order processing software for our own company's medical publishing. We have recently re-equipped with a medium sized Datapoint ARC network, operating under DOS. Whilst we use Assembler we are coding in the main we are now starting to develop database systems using Database. The company's business areas, which are starting to expand rapidly, concern publishing, mailing and membership systems. We are well advanced in the creation of a new, interactive subscription system and current projects include a book sales order system related to a marketing database. We are also very interested in computer typesetting both for our own use and to offer to clients. In all we currently employ a dozen people and we are therefore looking for somebody who appreciates the advantages of working for a small firm, in particular the involvement with decision making and the possibilities for real commitment and influence on the direction of the company's actions. We are conveniently located in S.W. London. A broad previous experience will be very helpful together with the maturity to work independently. Ref. MB 2/02

To Apply: For further details please telephone Ken Allwright on Maldenhead (0628) 36823, or write in strictest confidence (quoting the reference number) to C.L.I. Recruitment Advertising, 27 Marlow Road, Maldenhead, Berkshire

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Business Systems Advisor

Good salary with excellent benefits and an outstanding relocation package

Our client, a highly successful computer user, is based in a very attractive area of the South Coast of England. Their wide use of computing over a wide range of hardware from mainframe to micro is beginning to play an important part in both user thinking and demand. Because of this demand they now wish to recruit someone to work as a Business Systems Advisor. An unusual and particularly interesting position, the job requires someone with either a good business systems, an O & M or an OR background, to advise people at a variety of levels of seniority on the development of systems.

The responsibilities are very broad, but in general terms will necessitate significant liaison with users to determine business solutions to their problems. The majority of solutions would probably involve some kind of computer aid, and therefore a knowledge of micros and word text processing from the conceptional point of

view is a useful asset. Ensure that they agree and accept the solutions presented, and at the same time where necessary discuss with the computer systems group the user requirements.

If you feel your experience and interest is in the business area and you have a broad technical base, then we would like to meet you.

Without doubt, this is a very interesting opportunity and will allow someone over a period of time to develop a very interesting career. We would like to emphasise that we are looking for someone who is primarily interested in helping to determine the basic framework of an integrated technology based system in a diverse business organisation.

If you are interested please send a curriculum vitae, giving contactable telephone number.

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CONTACT JEFF BOWMAN

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To £13,000K
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CONTACT TIM BRIDGES



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CONTACT DON KNAGGS

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CONTACT KEITH PENGELLY

Software Engineers/Designers/Programmers

London/Berkshire/Wiltshire/UK
£8,000-£14,000K
Our client is a major prestigious force in the most up-to-date sector of the industry covering military, defence, process control and CAD/CAM. They require hardware, software and support engineers, designers and programmers with experience of communications (real time) PL/M-88, C, CORAL, PASCAL, FORTRAN, Assembler, Mescot, ADA, etc.

If you have two to four years' experience or more and ideally a HNC/HND or degree then this rare opportunity should not be missed.

CONTACT
KEITH PENGELLY
TIM BRIDGES

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Hampshire
£12,000-£16,000K
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CONTACT JEFF BOWMAN

KEITH PENGELLY
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Systems Software Development Support

This group is involved in many areas including:

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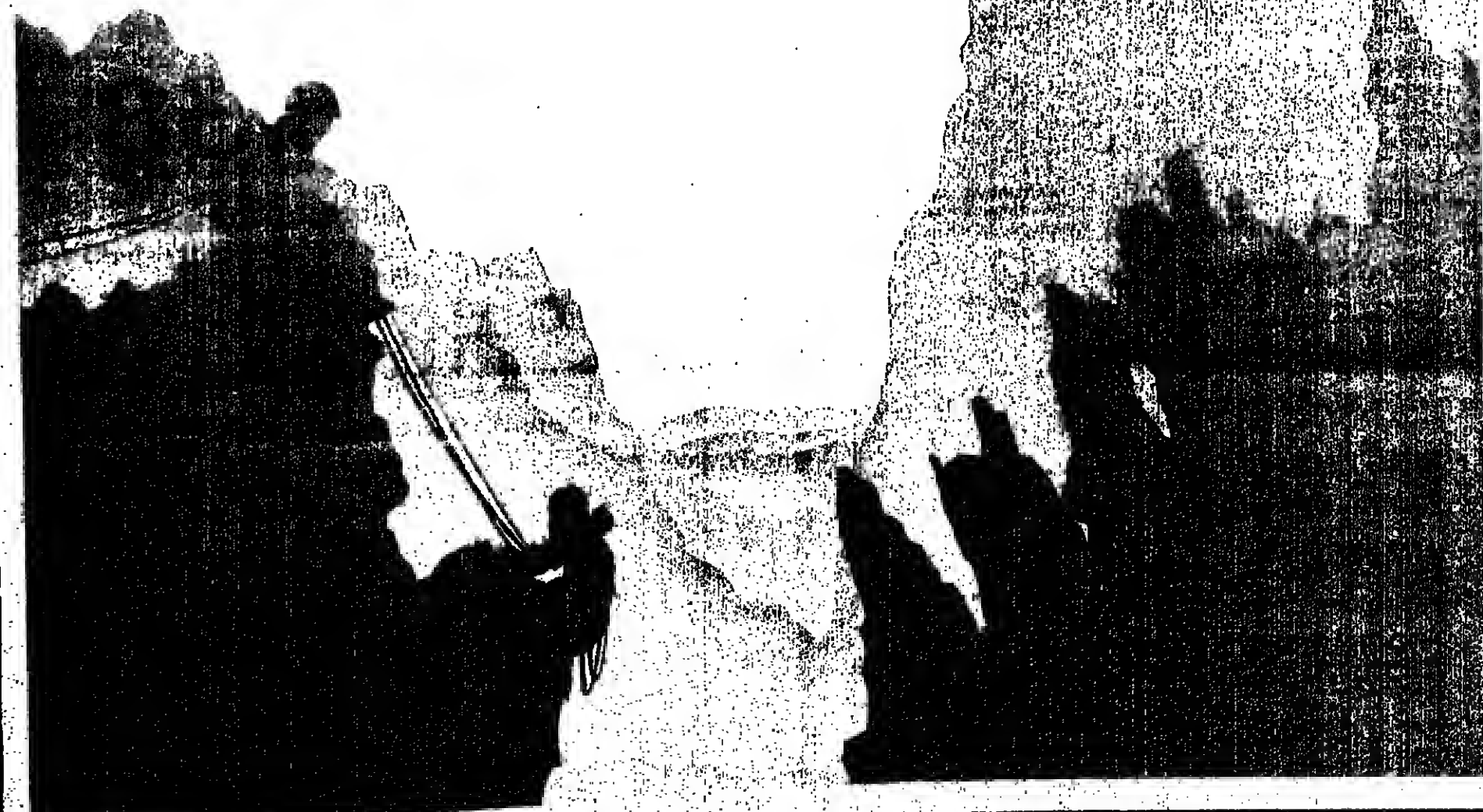
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For further information telephone Ferranti's recruitment consultants, starting with Leorio Kingford-Smith on 021-643 8501 or 0272 282966 or 021 353 4460 (evening/weekends). Alternatively simply complete and return the free post coupon to Computer People Midlands, Freeport, Alpha Tower, Birmingham B1 1BR.

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Successful individuals will contribute strongly in the design and development of new and existing products, complementing the existing board and packaged system range. Development strategy is based firmly upon state of the art technology.

The company has strong financial backing and can offer long term career opportunities in the USA or UK.

Attractive salary and subsidised housing form the basis of this fantastic opportunity to experience the mystical Orient.

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c. £7,500

Based in Stratford-upon-Avon

THE COMPANY: An expanding and successful subsidiary of United Biscuits, manufacturing a large range of biscuits.

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The IBM SYSTEM 34/36/38 Recruitment Specialists

System
34/36/38

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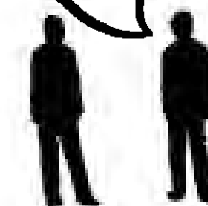
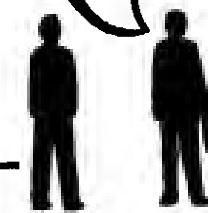
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"There are few projects in computing that can match the variety provided by Birmingham City Council

and we have the equipment to meet the challenge with an IBM 3033 and over 400 terminals"



Birmingham City Council, the largest city authority in England, serves a population of over 1 million with a diverse commercial and industrial community. The City Treasurer's Department has responsibility for over £700m expenditure p.a. on capital and revenue account and playing a vital role in the Department's activities is the purpose built Computer Centre. The Centre operates an IBM 3033 with 13,000 megabytes of backing store to support over 400 terminals with a further 200 planned. The next phase of the City's Development Plan is taking place which has created a number of opportunities for professional computer personnel to work on a wide selection of applications.

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It is unlikely that the persons appointed will have less than 3 years' systems experience.

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up to £9,231 p.a. (Ref. CD10)

Applicants should have experience of designing, writing and testing COBOL programs in either a GEORGE 3 or OS/MVS environment.

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MARK IV
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PROGRAMMER: SOFTWARE HOUSE SLOUGH £14,000
Share in continued growth of this successful company. Using DEC VAX/PDP11 you will be working on application systems for turnkey projects with considerable customer contact. Your drive, ideas and enthusiasm will be well rewarded. Ref: 01112.

ANALYST/PROGRAMMER MAIDENHEAD £11,800
Business growth leads to this opportunity to use Assembler, Fortran or PLM in relation to CAD/CAM products. Genuine career growth for questioning, motivated individual. Attractive location, BUPA, life insurance, pension scheme. Ref: 01136.

PROGRAMMER/ANALYST BRACKNELL £11,000
This major manufacturer offers broad systems exposure on continuously improving hardware and software in addition to a defined career path with the promise of overseas travel. Utilities on-site squash courts, bars, video room. Ref: 01116.

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REAL-TIME PROGRAMMER CAMBERLEY £10,800
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Step on to challenging and rewarding senior leader with leading computer manufacturer. You will be involved in investigation, recommendation and some Cobol programming on a specialised range of company products with considerable user interface. Ref: 01110.

PROGRAMMER: H.P. 3000 BRACKNELL £8,000
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We care enough to listen to what YOU need - for further details on our many vacancies contact REED COMPUTING APPOINTMENTS: Open 9 till late.

021-235 2993

IBM OPPORTUNITIES

ANALYST/PROGRAMMER To £10,000

WEST LONDON. Retail company in West London have recently purchased an IBM 4331, and are utilising CICS, ADAMAS and NATURAL. They require 2 years + IBM COBOL, with some experience of CICS, and you will be working on pure CICS development for the next couple of years, with your time split between programming and analysis. Good discount on clothes, 4 weeks holidays and BUPA Scheme. REF C/2363

IBM ANALYST/ PROGRAMMERS To £12,000

CITY. This highly respected financial company located in the heart of the City, have requirements for experienced IBM COBOL Analyst/Programmers to work on an IBM 4341 mainframe with DOS/VSE, VSAM and CICS experience. With the wide range of development projects they are currently undertaking, and planned for the future, they can offer excellent scope for career progression, with a unique opportunity to be involved with advanced systems. You will be well rewarded in terms of salary which will include a productivity bonus. REF C/2367

SYSTEMS ANALYST c£12,500

Exciting position for an analyst with these brand new IBM users. They are looking for 3/4 years sound commercial analysis, gained at an IBM environment, with the ability to take systems from design to implementation, liaise with users, get involved in CICS design work, and use your initiative and common sense to the full. REF C/2368

IBM COBOL £8,000

ESSEX. Stimulating and highly rewarding opportunity existing for a junior programmer who can offer 9 months + IBM COBOL experience either in a DOS or OS/MVS environment. Knowledge of CICS would be a distinct advantage but training in on-line and database techniques will be provided. You will be working within a small and closely knit department, where promotion is based on personal merit. This position offers real advancement for a young programmer who wants more career progression. REF C/2366

SENIOR PROGRAMMER IBM £10,000-£11,000

HERTS. Major manufacturing organisation in Hertfordshire are now in a position to recruit a senior programmer, to work in financial applications. The ideal candidate will have 5 years COBOL programming experience, and preferably CICS and VSAM. Supervisory experience would be a great advantage. This would be a good career move for someone who would like to be increasingly involved in management. Excellent benefits include staff restaurant, sport and social club, and staff discounts. REF C/2367

ANALYST/PROGRAMMERS To £13,500

HANTS. These positions with established finance company, housing an IBM 4341, with MVS, CICS and DL/I. They are seeking 3 levels of people from 12 months + experience up to 5/6 years, and you should be able to offer IBM COBOL, preferably with some CICS or DL/I, and the ability to expand your analysis skills. The senior analyst/programmer will be expected to take a project leading role occasionally and liaise extensively with users. Plenty of development work, and excellent benefits including full pension, profit sharing, cheap housing etc. REF C/2362

IBM ANALYST/PROGRAMMER £NEG

MIDDLESEX. Successful IBM 4341, VM/CMS, DOS/VSE are currently seeking an Analyst/Programmer with 2-4 years IBM PL/I experience to assist in the development of a wide range of systems including order-entry, production-control, invoicing etc. To enable you to participate fully in these new development plans, you will receive full training in CICS, and plenty of in-house education to enable you to expand your technical skills. Excellent career prospects and a full company benefits package, including travel allowance, pension scheme and a subsidised canteen. REF D/2364

RPG II/III

IBM SYSTEM 38 To £12,000

MIDDLESEX. Senior position with a rapidly expanding finance and insurance company situated in

their own new office block in North Middlesex. Your RPG III skills will be invaluable, in either a technical or applications role, and you will be well rewarded financially for your efforts. They would like in hand from programmers or analysts/programmers with 18 months-5 years experience of CICS and at least 6 months RPG III. REF C/2362

PROGRAMMER/ANALYST £10,000

CITY. Two years + IBM System 38/RPG II required for this interesting City position. You will be an integral part of a small team developing and supporting commodity trading and currency systems, and will hopefully progress into a business consultancy role within the firm. Excellent benefits including 2 salary reviews, BUPA, and Lunch Allowance. REF C/2377

IBM SYSTEM 38 £9,000-£14,000

CENTRAL LONDON. First class opportunities exist for IBM System 38 programmers and analyst/programmers. This major software house provide project management and software support to small business system users, with clients based in Central London and the Home Counties. If you are looking for limited career prospects and enjoy working in a fast moving environment, then why not call me to discuss these positions in more detail. REF C/2384

IBM SYSTEM 34 £12,000

CITY. Reputable firm of management consultants are looking for an RPG II Analyst/Programmer. The ideal candidate will have financial systems experience within the CICS field and at least 2 years RPG II. He will be developing major systems from design to implementation. This is a rapidly expanding company who can offer an excellent career path to self-motivated individuals. REF C/2388

RPG III To £11,500

CITY. Financial company in the City of London, have recently upgraded to an IBM System 38, and seek a competent and ambitious programmer/analyst with 3 years + DP experience. You must be able to offer at least 6 months RPG III/System 38 knowledge, and be interested in developing a range of financial/investment systems. As part of a small team, you will hold a great deal of responsibility. REF C/2378

ANALYST/PROGRAMMERS c£11,000

HERTS. A major multi-national organisation wish to continue their expansion drive by the addition of a further analyst/programmer. You will be part of a small team, responsible for IBM System 34 development. This is an ideal opportunity to improve your analytical skills and progress in your career. The company offer BUPA pension scheme, 4 weeks holiday and guaranteed hours.

OTHERS

DEC BASIC/FORTRAN £NEG

If you can offer in excess of 12 months DEC PDP or VAX experience under any operating system and using either BASIC or FORTRAN, you will be able to progress quickly in this fast-expanding organisation. Applications range from finance to administration. You will have a great deal of user contact and will enjoy an excellent salary and package. REF A/1910

PROGRAMMER PLUS To £11,000

ESSEX. Fed up commuting? Do you have 1-5 years ICL COBOL expertise? You could be joining this expanding professional computer services company based in Essex. They seek ambitious individuals with the desire to increase their DP knowledge whilst developing a sound and worthwhile career, in a senior programming capacity. Applications are mainly financial and they offer the chance to train on new machines, and to develop into analysts. An excellent salary and package is offered including flexi-time. REF D/2425

RETRAIN - ANY COBOL c£10,000

This major commercial organisation based on the London/Herts/Middlesex borders are expanding their U.K. division and seek programmers and seniors with a thorough knowledge of COBOL on any mainframe. They offer extensive training in UNIVAC 1100, database and relevant software. The systems are varied and range from financial to commercial. Career prospects are good and this is an excellent opportunity to develop your skills on an alternative machine. REF A/1782

HEWLETT PACKARD - COBOL c£9,000

Based in Surrey, this manufacturing concern seek a Junior Programmer/Analyst with a minimum of 6 months ITP3000 COBOL experience, preferably having used IMAGE, VIEW and QUERY. You will be developing on-line order processing, personnel, and accounting systems. Prospects for promotion are excellent and promotion will come rapidly to the right applicant. Phone now for more details. REF A/2364

ICL COBOL To £9,000 + Mortgage

SURREY. Highly successful ICL 2900 site currently in the process of developing new systems are offering interesting work to experienced and enthusiastic DP professionals. In order to achieve this development, they are seeking ICL COBOL/VME programmers. 18 months + experience is required, and exposure to TPMS and IDMS would be desirable, although full training can be provided. In addition to a competitive salary, they provide a well defined career path, pension and life assurance scheme, plus a mortgage subsidy. A relocation package may be offered where appropriate. REF D/2455

HONEYWELL - COBOL £10,500

Excellent opportunity for Honeywell mainframe programmer/analyst to further their knowledge whilst developing an exciting and sound career. If you have 18 months + Honeywell 166/64 COBOL expertise, hopefully having utilised DMA and TDS then I would like to hear from you. My client, a major Essex based concern is expanding its development team. There is plenty of scope for advancement. An excellent package and salary is offered. REF A/1712

ICL ME29 To £10,500

CITY. This is an excellent opportunity for a programmer to take up a key position within this well established insurance company. The company house 2x ICL ME29 running under TME. Applicants should have upwards of 18 months ICL COBOL experience, preferably utilising TPS. You will play an integral part in user training, coding, design and implementation of a range of insurance and business systems. This is a new position offering career prospects, in-house education, exciting development projects, and a pleasant and flexible working environment. Excellent package including subsidised lunches and 4 weeks holidays. REF D/2452

BURROUGHS - SENIOR c£13,000

This expanding professional organisation, based on the Middlesex/Surrey borders is seeking Senior analyst/programmers and analysts to become part of a team completing development work to an extremely high standard. You must have a minimum of 2 years relevant Burroughs mainframe experience coupled with the ambition to progress. Training is offered at all levels as is the opportunity to work on a variety of applications including: accounting, manufacturing and banking. An excellent package is offered. REF A/1913

DEC - BASIC/COBOL To £12,000

My clients based in the heart of the City are currently seeking an Analyst/Programmer with 2 years + DEC PDP or VAX expertise and one or more of the following: RT-11/TSX/VMS and either COBOL and/or BASIC. They offer the chance for you to become an integral part of a team developing varied and interesting financial and insurance systems to a very high standard. Promotion prospects are excellent. The company offer a salary that will more than commensurate with experience and standard large company benefits. REF D/2368

COBOL - RETRAIN To £10,500

MIDDLESEX. Superb opportunity for an ICL COBOL programmer to remain on the latest and most advanced Honeywell equipment, and increase their on-line and analysis skills. A minimum of 12 months relevant experience is required with one or more of the following: ICL COBOL, PL/I, TAB, GORGB II, DME or MTS. An excellent career path is envisaged. Call now for further details about this exciting position. REF D/2278

DEC - RETRAIN TO IBM! £NEG

Exciting opportunity for a DEC/PDP BASIC + 2 programmer to begin retraining almost immediately on a new IBM 4331 using CICS. You will be required to complete some maintenance on the DEC, whilst developing projects on the IBM. Applications include Order Processing, Management Information, and Ledgers. London-based, my clients offer a good career path, excellent salary and extensive training. REF A/2380

Dan Lampert COMPUTER STAFF SAUDI ARABIA PREFERABLY BILINGUAL ARABIC/ENGLISH

My client is seeking qualified computer staff to work within the PETROMIN organisation, which is concerned with exploration, production and refining of oil.

There are two vacancies

Computer Analyst - Dhahran

The computer analyst will identify the needs of the Supply Co-ordination Secretariat and recommend the acquisition of the appropriate equipment. He will generate data files and output formats and train staff to update data, produce statistical reports and maintain analytical computer models as required. Reference 8312.

Computer Manpower Planning Analyst - Riyadh

This analyst will prepare software to assemble data for manpower records within the PETROMIN organisation. He will also be involved in the analysis of requirements for training and upgrading of operational staff, including the training of staff in the use of computers. Reference 8315.

Computers currently in use are Apple II models

The above positions are open to graduates in computer science, who have a few years' experience. The minimum salary being offered is:

\$40,000 (U.S.) p.a. tax free

with free single or married accommodation, free utilities, U.K. schooling allowances if on married status, good leave, medical care and other company benefits.

Write immediately, in complete confidence, stating the reference numbers, to:

Dan Lampert BSc(Eng) FICE, FIMech E,
Personnel Consultant, Double L Consultancy Ltd,
Suite 1, Harcourt House, 19a Cavendish Square,
London W1M 9AD
Telephone: 01-629 2743

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Post Reference: TL020 Salary NJC Grade 7

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The office is situated by Rutland Water, a famous beauty spot, with leisure amenities of sailing, fishing, etc. Housing is plentiful and reasonably priced. Conditions of service are in accordance with the National Joint Council for Water Service Staff, and relocation expenses will be paid in appropriate cases.

Application forms, to be returned not later than July 19th, 1983 are obtainable from the Personnel Officer, at the address below.

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North Street, Oundle, Nr. Peterborough PE6 4AS
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143971

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We're currently seeking experts in Real-Time embedded defence systems to spend 2-3 years on "state-of-the-art" projects in Benelux. Thereafter, you'll have the choice of either returning to the UK company with enhanced experience and status, or extending your stay in Europe, or perhaps, of working elsewhere in the world.

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An information pack about the jobs, the benefits and the location is available, together with an application form from: Sharon McKeever, Software Sciences Limited, Abbey House, 282/292 Farnborough Road, Farnborough, Hampshire GU14 7NB. Tel: 0252 544321.

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Experienced microprocessor software persons with a keen interest in developing video games, are required to work on the development of original games for a variety of micro hardware systems. A solid Assembler background is essential as is the ability to be creative.

SUPPORT CONSULTANTS (Commercial Systems) — London/Cambridge

Salary to £12,000 plus car and benefits

A solid EDP background which includes micro experience is essential for these positions which have excellent promotional prospects. Experience of CPM, COBOL and/or DBASE 11 would be an advantage. The job involves both short and long term support (often on-site) working for clients who purchase integrated systems comprising both hardware and software.

FORTRAN PROGRAMMERS (CAD/CAM) — Cambridge-based

Salary £7,000-£9,000 plus car and benefits

A minimum of two years' good Fortran could provide you with the opportunity to gain experience of CAD/CAM based systems. The work will include development of major CAD packages and products. PRIME or VAX experience would be a distinct advantage but is not essential.

For further information please contact Jenny Dalrymple-Hay or Ian Murray-West on 01-493 2947, 8am to 10pm, Monday to Friday, or weekends, Jenny Dalrymple-Hay on Beaconsfield (04946) 4579, quoting Ref. 9984.

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To apply, you should have a wide experience in the field of commercial computer programming, in COBOL or BASIC, a knowledge of FORTRAN would be an added advantage, candidates should also have a knowledge of information systems. You should have received recognised training in the profession, followed by 5 years commercial experience. Possession of a recognised qualification would be an added advantage.

Pay starts at £7,130 rising to £8,489 (including Environmental allowance), 5 day week, generous holidays.

For further information and an application form, please write to: The Home Office (R2/7/83), FREEPOST, London SW1V 1YZ (no stamp required). Applications are invited from men and women.

The closing date for applications is 14.7.83.

H.M. Prison Service

A Service for Society

THE UNIVERSITY OF LANCASTER

Department of Computer Studies
LECTURER/SENIOR LECTURER

Applications are invited for the post of LECTURER/SENIOR LECTURER in the Department of Computer Studies. Applicants should have research and teaching experience in the development of microprocessor system design, microprocessor software or distributed computer systems. Appointment will be made on the Lecturer or Senior Lecturer scale according to qualifications and experience. Lecturer scale - £7,100-£14,125, Senior Lecturer scale - £13,515-£16,825.

Further particulars may be obtained by quoting reference L2508 from the Department of Computer Studies, University House, Bailrigg, Lancaster, LA1 4YW. Where appropriate, three references should be sent to the Personnel Officer, University College of North Wales, Bangor, Gwynedd LL57 2DS, by not later than 16th July 1983.

(4397)

College Principal (Applied Science, Bangor)
University College of North Wales
Bangor

ADVISORY/ APPLICATIONS PROGRAMMER

in the COMPUTING LABORATORY, available for three years from September 1st, 1983. Applicants should be graduates in Mathematics, Computer Science or one of the Physical Sciences, and preferably have a programming background and experience in advisory work.

The salary will be on the Odeon Academic Staff Scale, IS (£8,310-£12,935 per annum) or 1A (£7,100-£11,815 per annum).

Further particulars of the post may be obtained from the Personnel Officer, and applications (two copies) giving details of age, qualifications and experience, together with the name and address of three referees should be sent to the Personnel Officer, University College of North Wales, Bangor, Gwynedd LL57 2DS, by not later than 16th July 1983.

Applicants will be acknowledged if accompanied by a r.v.a.

(4397)

Yorkshire Regional Health Authority COMPUTER CENTRE

COMMUNICATIONS SPECIALIST

Technical Analyst Programmer
Scale 9 £8,387 to £10,277 + Proficiency Allowances of up to £554 according to exp.

The Authority is taking delivery of an ICL 2886 mainframe computer at this time and it is intended to develop a communications network throughout the Region. The latest ICL products are being introduced both centrally and at the remote sites and we need an experienced person to assist in planning, installation and day-to-day support of the network. The services to be maintained include MDP, MAC, RJE and TP using facilities available with Georges PME and the VME 2800 Operating System.

A knowledge of ICL communications software would be an advantage though applicants with experience of other manufacturers' products will be considered. New entrants to the NHS will start at the minimum salary point progressing by annual increments through the scale.

Application forms can be obtained from the Regional Personnel Officer, Yorkshire Regional Health Authority, Park Parade, Harrogate HG1 5AH. Tel: (0423) 85081 Ext 108/109. Please quote Ref No. ACB. Closing date: 16 July, 1983.

(4409)

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The company now seek Senior Technician/Designers to join existing project teams. Experience should encompass systems programming background being an Assembler language and any exposure to either database operating systems or communications software would be a distinct advantage. The project teams are fairly small and dedicated, thus every team member is able to make a major contribution to the design of the product. Consequently, responsibility is readily given and achievement more easily appreciated and rewarded.

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Software Engineers

Burroughs Industry Systems Group provides complete business solutions for specific industries. Within this Group the Croydon facility designs and builds micro processor based systems for data collection, transmission and processing primarily in banking services.

The continued development of data communications, network interfaces, automated later control, development tools and software quality assurance provides opportunities for Software Engineers with at least 2 years' experience in one or more of the following:

- transaction processing
- compiler design
- data comm at BIT and BYTE level
- peripheral device control and error recovery
- software quality assurance

Some international travel is expected, primarily to the United States. Career prospects within the company are excellent with provisions for transfer in the above subject areas being part of our development plan.

For further details, telephone Jim Smith, Software Manager, or write with full c.v. and for information on salaries, benefits and the relocation package to:

Mr. S.R. Phasent,
Personnel Manager,
Burroughs Machines Limited,
212 Purley Way,
Croydon,
Surrey,
Tel: 01-886 0355.

Burroughs

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Hampshire

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Salaries and benefits are aimed at recruiting and retaining high quality staff. Relocation expenses will be paid where appropriate.

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£5,308-£8,571 (inclusive of 12% shift allowance, Scale 2/AP2 with a bar at the maximum of Scale 2)

Applications are invited for the above posts. The Authority operates a 2886 mainframe, running under VME 2800 and supporting a large variety of work. There is a lively development programme planned which will substantially increase the staff complement currently in use.

Experience and/or training is required but consideration will be given to training in the above areas.

Application forms available from the Chief Personnel Officer, PO Box 88, Municipal Offices, Smith Street, Rochdale OL16 1XG. Tel: 47474. For info. To be received not later than Friday, 15th July, 1983.

your appointments register

Programmers

NCR/IBM/COBOL to £15K
Insurance Banking London/H. Counties/N. Eng.

COBOL/PL1/OS/CICS/IMS to £13K
Commercial H. Counties/Midlands/Manchester

ICL/ON-LINE EXP to £12K
COBOL Surrey

HONEYWELL to £12K
Systems Programming experience Midlands/London

DATA GENERAL ECLIPSE to £11K
Cobol Leicestershire

IBM/RPG2 to £12K
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IBM to £16K
Systems exp. Essex

BASIC to £11K
Mini Computers London

IBM/UNIVAC/COBOL to £12K
On-line/Database Surrey

NCR 8200 to £14K
Financial SW LONDON

Analyst/Progs.

PRIME CAD/CAM to £11K
E. Anglia

IBM 34/38/4341 to £15K
London/Home Counties/Nor.

ICL 1500/ME 29/2903 to £12.5K
COBOL Essex/Herts.

PRIME/COBOL to £11K
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TECHNICAL MANAGER to £15K
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SOFTWARE TECHNICAL AUTHOR to £15K
Honeywell Bull Level 64/DPS 7 Paris

PROJECT ENGINEER to £11K
Systems/DEC Beds/Manchester

ENGINEERS to £15K
Torch Micro/Networking London

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IBM/ICL to £12K
Stock Control/Commodity Control London

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Real time - Modelling Manx/Essex/South West

IBM/BURROUGHS to £15K
Commercial Accountancy London/Surrey/Manchester

IBM/PL1/DL1 to £11K
Database Support Middx.

ICL/ME29 to £16K
Commercial Design Berks.

IBM SYSTEM 34/38 MAAPICS to £13K
Sussex

Software Engineers

CORAL/PASCAL/MASCOT/C to £13K
Communications Glouce/Herts/Sussex/Midlands/Manchester

REAL TIME/ASSEMBLER to £13K
Microprocessor Design Suffolk Coast

MILITARY SYSTEMS/RADAR to £14K
Coral - Mescoi Herts/Surrey/Essex/S. West

PDP/VAX/INTEL to £13K
Telecomms - ATE Derby/Surrey/London/Kent

COMMS/TELECOMS/MOD to £14K
Mini/Mainframe E. Anglia

HP3000/INTEL to £12K
CAD/CAM/ATE Home Counties

TERMINAL EMULATORS to £15K
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The Appointments Register

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BRIGHTON POLYTECHNIC FACULTY OF ENGINEERING AND ENVIRONMENTAL STUDIES ENGINEERING PROGRAMMER/ ANALYST

Salary up to £8,231

Applications are invited from science or technology graduates to fill a newly created role spanning, in the first instance, the Electrical and Mechanical Engineering disciplines. The successful applicant will work in close co-operation with staff and students at both departments in an advisory role, but will also become deeply involved in both hardware and software developments. The ability to programme in microprocessor assembly language as well as higher level languages is essential, and experience of interfacing both analogue and digital equipment to microcomputer systems would be an advantage.

The post will be one in which a young graduate can acquire a valuable range of experience.

Further details and application forms from the Deputy Head of Personnel, Brighton Polytechnic, Moulsecomb, Brighton BN2 4AT. Tel: Brighton 693855. Closing date 28 July, 1983.

(4384)

University of Leeds Department of Linguistics and Phonetics

Applications are invited for the post of

ELECTRONICS TECHNICIAN

(Grade 3)

The person appointed will work under the direct supervision of the Chief Technician in many aspects of speech signal processing. The Department has a leading position in the world of human-machine communication. A strong interest in computerised speech analysis as well as high level languages and in hardware-software interfaces will be required.

The post offers the opportunity of working in the development of computer tagging of laboratory data, computer control of signal analysis and computer analysis of digital signals for the control of human-machine communication. A strong interest in computerised speech analysis as well as high level languages and in hardware-software interfaces will be required.

Applications in writing to the Head of Department of Linguistics and Phonetics, University of Leeds, Leeds LS2 9JT. Closing date for applications: July 20, 1983.

(4403)

UNIVERSITY OF LIVERPOOL COMPUTER LABORATORY

DEPUTY DIRECTOR

Applications are sought for the above post. The person appointed will be responsible for the day-to-day running of the computing service and assisting the Director in the planning and development of computing services for the University, particularly the academic services. The successful candidate will be expected to deputise for the Director when necessary and to have a wide knowledge of, and to be involved in, all aspects of University computing services. A relevant post-graduate qualification would be an advantage, but above all, proven ability to organise and supervise the work of other staff is essential for this post. Initial salary will be within the range £13,816-£14,485 per annum, rising to £18,325 per annum with the possibility of subsequent promotion.

Applications, including the names of three referees, should be sent by 15th July, 1983, to The Registrar, The University, P.O. Box 147, Liverpool L69 3GB. Further particulars can be obtained. Quote Ref: RV/84.

(4244)

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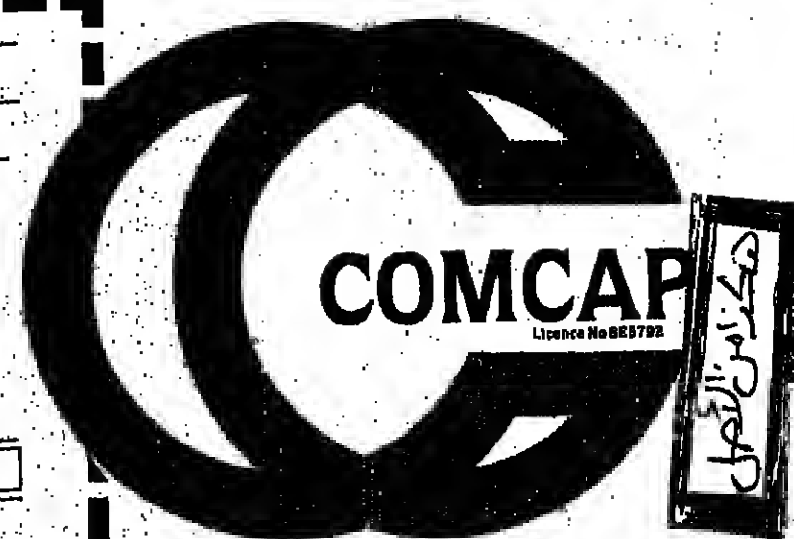
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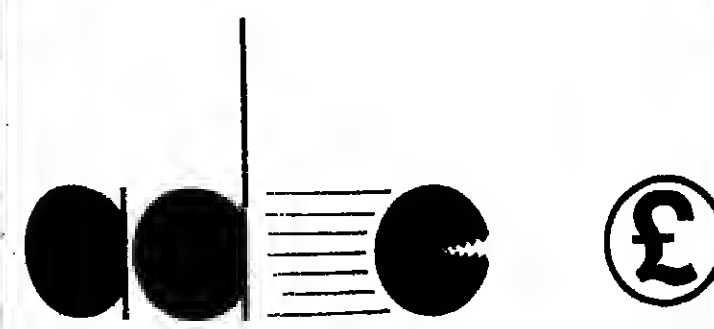
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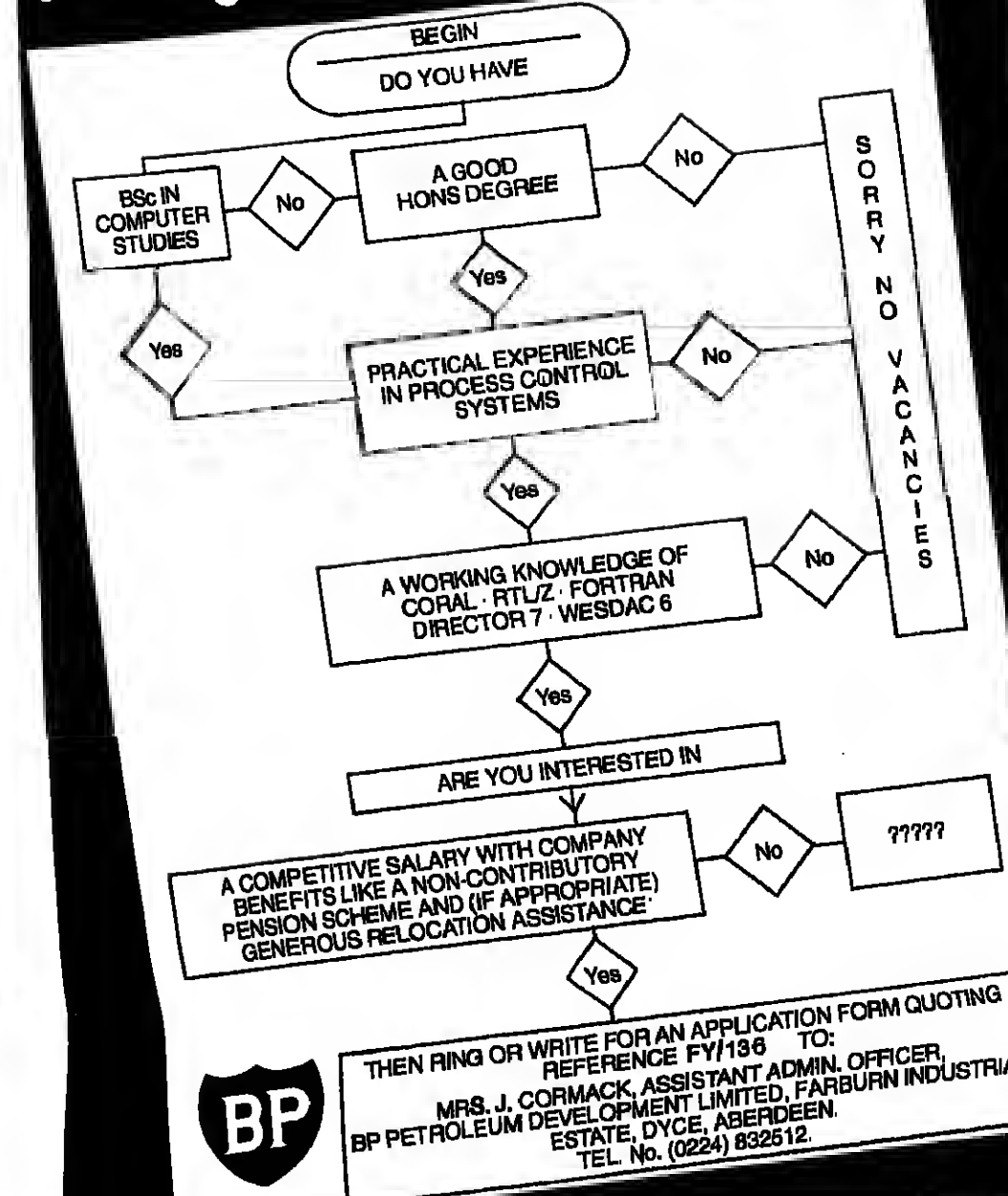
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WESTERN AUSTRALIAN INSTITUTE OF TECHNOLOGY

LECTURER COMPUTER-SCIENCE

Responsible for development and teaching programmes offered by the Department of Computer Technology in the School of Electrical and Electronic Engineering. Preference given to applicants who have research and teaching interests in one or more of the areas of Data Communications, Computer Systems, Software Engineering, Computer Graphics, Networking, VLSI Design. Applicants should possess a professional qualification in Computer Engineering-Science or related field (Ref 580).

SALARY RANGE: A\$22,430 - A\$29,467 P.A.

Applications: details including the names and addresses of three referees should be submitted in duplicate not later than 22nd July, 1983, to the Migration Officer, Western Australia House, 118 Strand, London WC2R 0AL, from whom further information may be obtained. When applying please quote ref. no. and code CWS.

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Applicants should have a sound computing background with at least six months' Basic programming experience (CMC Data Basic would be of special interest) in order that they may maintain and enhance existing systems. A vital part of this position is the liaison with the in-house users producing "Ad-Hoc" programmes from the totally integrated accounting system. Candidates with any communications experience or knowledge of word processing systems would be of particular relevance since the client places great importance on the development of these areas.

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For further details on this "Ground Floor" opportunity please contact Sean Orsler at Apex.

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24, Uccle 1180 Brussels.
Tel: 010 322 377 4193



POLICE COMPUTING

Greater Manchester Police is one of the largest Forces in the country with a comprehensive programme of computerisation.

The Force is currently installing a major computer system based on Tandem hardware incorporating criminal records, message switching and an associated data network linking Headquarters to divisions and sub-divisions. The Force is also in the process of installing, developing or planning a number of other applications which include command and control, and interface with the Police National Computer, personnel (based on Honeywell hardware), stock recording, fixed penalty procedures, word processing and other administrative and operational systems.

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PROJECTS LEADER

c.£14,000 within PO2 (6-10) subject to review.

You will head a team of nine systems analysts and programmers who work with police officers and provide essential technical input to the several projects.

You should have had at least seven years in computing with a particularly wide experience of systems analysis and design as well as implementation of police or commercial systems.

The post, although in the County Treasurer's establishment, is within the Force computer project branch which is currently based in Prestwich, Manchester but is shortly to move to Force Headquarters in Trafford, Manchester. For an informal discussion phone Chief Superintendent Rankin, Projects Manager, of 061-798 9857, extension 300.

Application form, job description and further details from the County Treasurer, Greater Manchester Council, County Hall, Piccadilly Gardens, Manchester M60 3HP. Closing date July 11th, 1983.

CONTRACTS

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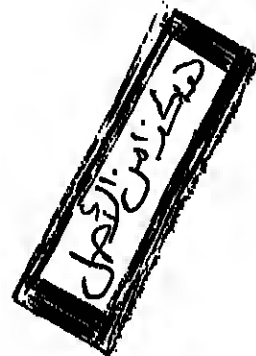
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Applicants should have a degree or equivalent in Mathematics, Computer Science or other relevant discipline, and have experience in a scientific, technological or commercial field. Arrangements for research towards a higher degree can be made.

Details from: Assistant Personnel Officer, Coventry (Lanchester) Polytechnic, Priory Street, Coventry CV1 5FB. (Please enclose a large self-addressed envelope). Closing date, Friday, 8th July, 1983.

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Mrs Carol Bird, Staff Assistant, The Equitable Life Assurance Society, Watton Street, Aylesbury, Bucks, HP21 7QW. Telephone: Aylesbury (0298) 33100.

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